CONSTRUCTION MANAGEMENT

CONSTRUCTION CONTRACT ADMINISTRATION

Greg Goldfayl

Second Edition

UNSW PRESS

A UNSW Press book

Published by
University of New South Wales Press Ltd
University of New South Wales
Sydney NSW 2052
AUSTRALIA
www.unswpress.com.au

First published 1999 by Deakin University Press
Reprinted 2000
Republished by UNSW Press 2002
Second edition 2004

National Library of Australia
Cataloguing-in-Publication entry

Goldfayl, Greg.
Construction contract administration.

2nd ed.
Bibliography.
Includes index.
ISBN 0 86840 517 5.

1. Construction contracts. I. Title.
(Series : Construction management series
(Sydney, N.S.W.)).

692.8

Design Dana Lundmark
Printer Ligare

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CHAPTER 1

INTRODUCTION TO CONDITIONS OF CONTRACT

OVERVIEW

In many respects, a building and construction contract is just like any other contract. It is a voluntary agreement between two parties, entered into for mutual benefit, in which one party provides goods or services to the other party in return for a payment, usually referred to in contracts as 'the consideration'.

However, the building and construction contractor provides goods and services that are extremely complex in nature. They comprise the completed structure, along with many management and financial skills and technical competence in construction. These quite considerable skills also involve the ability to control a varied and fluctuating workforce composed of the contractor's own labour as well as subcontractors.

A building and construction project has many of the same commercial implications as any other normal business transaction. However, such a project tends to be far more complex an undertaking than most business transactions of a comparable magnitude. It is also quite unlike most other industrial projects because it involves the manufacture of a product (a structure) not at the manufacturer's (the contractor's) workshop or factory, but on land (the site) belonging to the owner.

This is a circumstance that, unless approached prudently and with an adequate understanding of the risk, may lead to ownership of that structure passing to the owner of the land without payment. Such a seemingly bizarre situation can arise because under Australian law, as

in many other jurisdictions, and in the absence of specific arrangements to the contrary, an improvement constructed on a piece of land can automatically become the property of the owner of that land.

A building and construction project is a complex undertaking in which the related contractual arrangements are inevitably and correspondingly complex. They therefore call for a suitable framework of contract documentation and administration that recognises and matches that complexity. For that reason alone, if not for those referred to above, a building and construction contract must clearly define:

- the scope or extent of work
- the quality standards of the materials and workmanship
- the time frame within which the project is to be constructed
- the price that is to be paid to the contractor for carrying out the work
- a mechanism for varying any or all of these parameters.

This chapter introduces some definitions and concepts that are fundamental to an understanding of building and construction contracts. It examines the difference between standard and tailored contracts, and the range of standard contracts available for use with a traditional building and construction project. It also examines the basis upon which a traditional building and construction contract is administered in terms of the contract documents, the works and the site.

The traditional building and construction procurement process moves through clearly defined stages. Firstly, the 'owner' commissions a 'designer', who may be an architect or an engineer, to design a building or other structure, and briefs the designer about its requirements. The owner may be a person, a partnership, a corporation or a government body. The designer, too, may be a person, a partnership, a corporation or a government body.

The designer, who is now the owner's representative throughout the procurement process, then designs the building with the assistance of specialist consultants. These are engaged by the owner at the designer's request and may include, among others, an architect, structural and services engineers, an interior designer, a landscape architect and a quantity surveyor.

When the design stage is complete, the designer calls for 'tenders' from building and construction contractors. This may be done either by public or private invitation to tender, according to the desires of the owner and the recommendations of the designer. In the case of a major project, the designer may call publicly for 'expressions of interest' from contractors, and then select privately, from among the respondents, a short-list of suitable contractors who will be invited to submit a tender by a given date.

The documents issued to tenderers as the basis for tendering for the 'works' may include an invitation to tender, conditions of contract, drawings, a specification and a bill of quantities. The tender documents may also specify a completion date.

Tenderers then submit a lump sum price for construction of the works described in the tender documents. This may be either a fixed lump sum price or, alternatively, a lump sum price which is variable according to a formula that takes into account fluctuations in the market price of labour and materials. Tenderers may also be required to submit a proposed construction program or schedule. Tenderers sometimes also submit 'non-conforming tenders', which may promise the owner financial or time advantages in return for modifications of specific conditions in the tender documents.

The designer now assesses the submitted tenders, and recommends one to the owner as the most suitable. The recommended tender is frequently the lowest priced, but may also be the one that promises the best overall combination of price, speedy completion and quality of work.

The successful tenderer then enters into a contract with the owner, and becomes the 'contractor'. The contract is for the construction of the works, to the specified quality and by the stated date, for the agreed price. The contractor may be required to submit a construction program or schedule and a priced bill of quantities.

The contractor constructs the works under the superintendence of the designer, who now assumes the additional role of 'contract administrator'. The contract administrator exercises a dual role: as the owner's representative; and as an impartial assessor, valuer and certifier of the contractor's work. The contract administrator uses the construction program or schedule to assess the progress of the work; and, with the quantity surveyor, uses the priced bill of quantities to assess the value of work completed and to price variations to the works.

It should be noted that this traditional procurement process may sometimes be modified by the appointment of a 'project manager' as the owner's agent.

Thus, the parties to a traditional building and construction contract are: the owner, which wishes to have a structure built on its land; and the contractor, which is in the business of constructing such structures for others.

Also involved in the project, though not in the contract, are:

- the designer – who provides general design and contract documentation, and superintends the project
- any number of specialist design consultants – who provide design and contract

documentation, superintendence and administration for specialised elements of the project under the direction of the contract administrator
- the contract administrator – who administers the project on behalf of the owner and is often also the designer
- any number of specialist subcontractors – who construct specific elements or trades of the project under the direction of the contractor.

The contractor and each subcontractor are parties to a subcontract.

The contract administrator may be either the designer or an employee or consultant of the owner. Frequently, some of the functions of the contract administrator are carried out by a consultant quantity surveyor employed either by the designer on the owner's behalf or directly by the owner.

The contractual links in the traditional building and construction contract are:

- the owner enters into a contract with a designer to provide general design and contract documentation, superintendence and administration for the project
- the designer arranges for the specialist design consultants to enter into a contract with the owner to provide design and contract documentation, superintendence and administration for specialised elements of the project
- the designer arranges for a contractor to enter into a contract with the owner to construct the work of the project
- the contractor, who does not necessarily directly employ all the trades needed for the project, enters into a subcontract with each trade or specialist contractor to carry out specific work in the project.

During the construction phase, the owner gives directions to the contract administrator, who gives directions to the contractor who, in turn, gives directions to the subcontractors. The subcontractors make claims for payment to the contractor, with whom they have a contractual relationship, and the contractor makes claims for payment to the owner, with whom it, likewise, has a contractual relationship.

The communication links, however, do not directly reflect these contractual links during the construction phase, since:

- the owner gives directions only to the contract administrator, not the contractor or the subcontractors
- the contract administrator gives directions only to the contractor, not the subcontractors
- the contractor gives directions to the subcontractors.

This chapter presents the reader with a comprehensive view of the contractual background against which a building or construction project is carried out and provides some answers to the following frequently asked questions:

- Who are the parties to the contract? What are their respective obligations?
- What are the contract documents? Who owns them and how are they related?
- What are the owner's obligations with respect to the site?
- Who has possession of the site at each stage of the project? Who may have access to it at those stages and under what conditions?
- Who has the obligation of arranging access to adjoining properties when necessary?
- What are the works? How do these differ from the works under the contract?
- What special conditions may be incorporated in the contract? How is this done?

THE CONTRACT

A building and construction contract is an agreement between an owner and a contractor that the contractor will construct a specified structure for the owner, to a specified standard and within a specified time, in exchange for a specified sum of money which the owner will pay to the contractor.

The contract, therefore, is defined by:

- the date on which it comes into effect
- the parties which undertake to give it effect
- the scope and quality of the work to be done
- the contract sum (or consideration) to be paid for the work
- the time for completion of the work.

Standard and tailored contracts

A building and construction contract may be either standard or 'tailored'. This distinction refers to the uniqueness or otherwise of the contract.

A standard contract is one which has been drawn up for general use by a wide range of owners and contractors and which may be purchased over the counter. It has been written by specialists in building and construction contracts to suit a particular range of contractual arrangements. The widespread use of a standard contract means a large body of architects, engineers, quantity surveyors, contractors and others are familiar with most of its provisions and practical implications.

With an unamended standard contract, the distribution of contractual risk is largely out of the owner's hands, since the contractual obligations of both parties are mostly predetermined, in kind if not in degree. Furthermore, the risk of either the owner or the contractor finding that it has acquired some unexpected contractual obligations is largely eliminated, since the implications of the contract

should be well known to the advisers of both parties. There tend to be, therefore, few unpleasant surprises arising from a standard contract.

A tailored contract, on the other hand, is one that has been drawn up by a lawyer with experience in the building and construction industry to suit a particular client and project. By virtue of its uniqueness, it is capable of distributing the risks, rights and responsibilities to suit the initiating party. It may well be to the owner's advantage to use a unique contract, which will, at least in principle, allocate the desired distribution of contractual risk to the contractor. However, due to its very uniqueness, and therefore its unfamiliarity, it may also incorporate some unintended consequences, thus entailing unforeseen legal traps for both parties.

STANDARD CONDITIONS OF CONTRACT

Housing sector

There is no standard form of lump sum contract in general use in the housing sector of the building and construction industry throughout Australia. Housing contracts vary from state to state because of the differing state and territory laws governing domestic construction, and little purpose would be served by listing them all in detail, since none of them will be examined further in this text.

However, by way of an example of the available range, the following lump sum housing contracts are used in Victoria:

- **HC5 – 2001** ***Major Domestic Contract***
- **HIC4 – 2001** ***Home Improvements Contract***
- **VNHC – 2003** ***New Homes Contract***
- **VAARC – 2003** ***Alterations, Additions & Renovations Contract***
- **VSWC – 2002** ***Small Works Contract.***

HC5 and HIC4 are published by the Master Builders' Association of Victoria. They are specifically designed for use in the housing sector in Victoria, for new construction and for extensions and alterations respectively.

VAARC, VNHC and VSWC are published by the Housing Industry Association Limited, Victoria Division. They are specifically designed for use in the housing sector in Victoria, for new construction, for extensions and alterations, and for small works not including footings or foundations, respectively.

Non-housing sector

There are many standard forms of lump sum building and construction contract in general use in the building and construction industry

throughout Australia. Some forms are published in and restricted in use to individual states. The following forms are in general use Australia-wide:

- PC1 – 1998 *Project Contract*
- ABIC BW-1 2002 *basic works contract*
- ABIC EW-1 2003 *early works contract*
- ABIC MW-1 2003 *major works contract*
- ABIC SW-1 2002 *simple works contract*
- ABP-1 1992 *Lump Sum Contract for Minor Building Works with Administration by Proprietor*
- GCC3 – 1994 *General Conditions of Contract*
- NPWC3 1981 *General Conditions of Contract*
- AS2124 – 1992 *General Conditions of Contract*
- AS4000 – 1997 *General conditions of contract*
- MWCCC – 2001 *Medium Works Commercial Contract Conditions*
- MWCNSA – 2001 *Medium Works Commercial Contract – No Superintendent/Architect Appointed.*

PC1 is published by the Property Council of Australia (formerly the Building Owners and Managers Association of Australia Limited). It is used for major building projects where the owner has appointed a contract administrator to administer the contract, and where the bill of quantities, if provided, may or may not form part of the contract. This contract may be used with staged completion.

ABIC BW-1, EW-1, MW-1 and SW-1 are published jointly by the Royal Australian Institute of Architects and Master Builders Australia Incorporated. They are part of the ABIC (Australian Building Industry Contract) suite of documents, which has displaced the earlier JCC documents.

BW-1 is used for basic building works – such as small renovations and single trade projects – where the owner has appointed an architect to administer the contract and where bills of quantities do *not* form part of the contract. Note that residential projects require special clauses in all states and territories of Australia.

EW-1 is used for early building works – such as demolition, excavation, site preparation or decontamination, in-ground services and the like – where the owner has appointed an architect to administer the contract and where bills of quantities do *not* form part of the contract.

MW-1 is used for major building works where the owner has appointed an architect to administer the contract and where bills of quantities, if provided, do *not* form part of the contract. This contract may be used with staged practical completion.

SW-1, the last of the ABIC contracts, is used for simple building

works where the owner has appointed an architect to administer the contract and where bills of quantities do *not* form part of the contract.

ABP-1 is published by the Royal Australian Institute of Architects. It is used for building works (including alterations) of a relatively small scale where the proprietor has appointed an architect but where bills of quantities are *not* provided and where the proprietor wishes to administer the building contract.

GCC3 is published by Master Builders Australia Incorporated. It is used for non-domestic construction or alterations and extensions where the proprietor or its nominee is supervising the works.

NPWC3 is published by the Australian Procurement and Construction Council (formerly the National Public Works Council), the member organisations of which are Commonwealth and state public works departments. It is generally used for public sector building construction and civil engineering works. It has been largely displaced for this purpose, first by AS2124 and then by AS4000.

AS2124 and AS4000 are published by Standards Australia. AS2124 is generally used for a wide variety of engineering and construction contracts. It is also widely used for all manner of public sector building works and has largely displaced NPWC3 for this purpose. While this form does not actually state that it is intended for use in building and construction works, it is listed in the Standards Australia catalogue under 'Construction'.

AS4000 is suitable for application in a wide variety of construction and building contracts, including civil, mechanical, electrical and other types of engineering contracts. It is expected eventually to displace AS2124 for this purpose, as well as for all manner of public sector building works. While this form also does not actually state that it is intended for use in building and construction works, it too is listed in the Standards Australia catalogue under 'Construction'.

Lastly, MWCCC and MWCNSA are published by the Housing Industry Association Limited. They are used for non-domestic construction or alterations and extensions where a superintendent or an architect either has or has not, respectively, been appointed to administer the contract.

Selecting a standard contract

Before selecting a standard contract for a specific building and construction project, it is necessary to determine a large number of factors, including:

- **the type of project – engineering, industrial, commercial or residential**
- **the magnitude of the project – large, medium or small**

- the complexity of the project – simple, normal or complex
- whether the work is principally alterations or principally new work
- whether the owner, or an architect or engineer, or some other party, will administer or supervise the project
- whether a bill of quantities will be provided; whether it will form part of the contract; and, if so, to what extent
- whether there will be staged practical completion
- whether payment to the contractor will be by a lump sum, a schedule of rates or cost plus a fee.

Contracts to be studied

All forms of building and construction contract deal largely with the same matters which, in turn, affect all building and construction contracts. Consequently, a reasonably detailed examination of any one of the main standard forms should enable the reader, by extrapolation and after careful reading, to administer any of the other main standard forms. It should also provide the reader with a sound basis for administering a tailored contract.

This book examines in detail only two of the many standard forms of contract. This is done to enable the reader to study these two forms in far more depth than would be possible if a larger number of the available forms were to be studied in a limited time:

- ABIC MW-1 2003 *major works contract*, produced by the Royal Australian Institute of Architects and Master Builders Australia Incorporated
- AS4000 – 1997 *General conditions of contract*, produced by Standards Association of Australia.

These are referred to throughout the text as 'MW-1' and 'AS4000' respectively.

These two forms were selected for detailed examination for several reasons. Firstly, they are designed for a traditional building and construction contract, involving a contract administrator who represents the owner during the construction phase, a lump sum price, and the option of either a single completion date for the entire works or staged practical completion. AS4000 also allows all possible levels of status for the bill of quantities, while MW-1 is predicated on the bill of quantities, if provided, *not* forming part of the contract.

Secondly, AS4000 is already widely used and enjoys a high level of recognition and familiarity among building and construction practitioners of all disciplines. MW-1 is expected, because of its provenance, to achieve a similar breadth of use and level of recognition within a relatively short time.

These contracts also jointly encompass two highly significant dimensions of building and construction project differentiation:

- **building construction/engineering construction**
- **public sector/private sector.**

In addition, they demonstrate that a range of different contractual formats and approaches is possible, and illustrate the way in which such different formats and approaches can be used to achieve what are essentially the same contractual ends.

This chapter is an introduction to the two forms of contract to be studied. The reader should note, as stated in the 'Introduction', that the explanatory notes which relate to the various contract clauses are in no way a substitute for a full reading of the contract forms themselves, supplemented by selected reading.

DEFINITIONS OF CONTRACTUAL TERMS

In a building and construction contract, as in any other contract, great importance is attached to the definition of the terms used. After all, if one or more terms are not clearly defined, it becomes progressively more difficult to work out what the rights and obligations of the parties may be. In extreme cases, the interpretation of the terms, and hence of the rights and obligations conferred by them, may require determination by a court of law.

Most of the terms which are defined in the early part of both contracts are of major significance throughout the respective contract. These terms are examined below. A few other terms, however, have very specific application and are therefore examined in other chapters, where they are of particular significance.

Note that the term 'person' may signify not only an individual but also a firm, a partnership, a corporation or a government body.

MW-1: section S

The contract is 'executed' (that is, made and agreed) between the owner and the contractor. Their respective identities, as well as those of their representatives, are established by their execution of the contract as those parties, which is effected by their completion and signing of items 1 to 7 of the 'Introduction'. Where appropriate, the identities of the owner's lending institution and its representative are also established. The date on which the contract is 'made' (comes into effect) is the date on which the contract is signed by the parties to it.

Under section S, 'Definitions', the following terms are defined:

Business day	Monday to Friday, other than a statutory public holiday applicable in the state or territory in which the site is located
Claim to adjust the contract	a claim made to the architect to adjust either the contract price (including any adjustment of time costs) or the date for practical completion, or both
Contract documents	the conditions of contract, any special conditions retained in or inserted into schedule 2, 'Special conditions', and any documents listed in schedule 3, 'Order of precedence of contract documents'
Contract price	the cost of building work (see below) plus GST, as shown in item 4, 'The contract price', of the 'Introduction' (see Chapter 3)
Cost of building work	the actual cost of carrying out the works, excluding GST
Defect or defective work	work that does not comply with the contract
GST	the *Goods and Services Tax*
GST Act	the *A New Tax System* (*Goods and Services Tax*) *Act 1999*
Input tax credit	input tax credit under the GST Act
Insolvency event	any occurrence that indicates or predicts a party's actual or potential inability to pay current or future debts (see Chapter 4)
Non-working days	statutory or public holidays, rostered days off and any industry shut-down periods applicable to the state or territory in which the site is located
Promptly	as soon as is practicable
Relevant authority	a body or organisation which has authority over the works under 'relevant legislation'
Relevant legislation	any legislation that applies to the contract due to the nature of the works
Site	all places which are made available by the owner to the contractor for the construction of the works and related purposes, as described in item 7, 'The site of the works', of the 'Introduction'
Tax invoice	an invoice for payment complying with the GST Act
Working day	Monday to Friday, excluding 'non-working days' (see above)
Works	the completed construction in accordance with the contract documents, as described in item 6, 'The works', of the 'Introduction'.

The following terms (listed in *section S*) are referenced to specific clauses of the contract and are discussed elsewhere in this or later chapters, where they are of specific importance:

- 'Adjustment of time costs' (see Chapter 7)
- 'Authorised person' (Chapter 6)
- 'Critical construction activity' (Chapter 7)
- 'Dangerous or contaminated material' (Chapter 3)
- 'Latent condition' (Chapter 3)

- 'Practical completion' (Chapter 9)
- 'Prime cost sum' (Chapter 5)
- 'Provisional sum' (Chapter 5)
- 'Site information' (Chapter 1)
- 'Unconditional guarantee' (Chapter 2)
- 'Urgent instruction' (Chapter 3)
- 'Valuable item' (Chapter 3)
- 'Variation' (Chapter 6).

AS4000: clause 1

Under clause 1, the following terms are defined:

Bill of quantities	a document which states the estimated quantities of work to be carried out and which is issued to tenderers by or for the Principal
Compensable cause	an act, default or omission by the Principal or any of its agents, or any cause listed in item 26, 'Delay damages, other compensable causes', of annexure part A
Construction plant	all equipment used in carrying out the work under the Contract, but which is not part of the 'Works' (that is, not required to be handed over to the Principal)
Contract sum	• either the lump sum, or • the product of the rates and quantities in a 'bill of quantities' or a 'schedule of rates', or • the aggregate of both. It includes provisional sums, but excludes any adjustments.
Contractor	the person named in item 3, 'Contractor', of annexure part A who will carry out the work under the Contract, and whose address is stated in item 4, 'Contractor's address', of annexure part A
Date of acceptance of tender	the date of the written notice of acceptance of the tender
Date for practical completion	the date by which practical completion is required to be achieved; stated as either item 7(a), 'Date for practical completion', or item 7(b), 'Period of time for practical completion', of annexure part A
Date of practical completion	the date on which practical completion is actually achieved or is subsequently determined to have been achieved
Direction	any written contractual communication from the Superintendent to the Contractor
Intellectual property right	a non-material protected right
Item	an item in annexure part A
Legislative requirement	a requirement of the state or territory in which any of the works under the Contract are being carried out, including the requirement to provide or obtain a formal document in connection with those works

Practical completion	that stage when the Works are complete except for minor omissions and defects, all tests have been passed and all operating and maintenance manuals and other information have been supplied
Principal	the person named in item 1, 'Principal', of annexure part A, and whose address is stated in item 2, 'Principal's address', of annexure part A
Qualifying cause of delay	the cause of any delay which is beyond the Contractor's control, excluding industrial conditions or inclement weather occurring after the date for practical completion and excluding any cause stated in item 23, 'Causes of delay for which EOTs will not be granted', of annexure part A
Schedule of rates	a schedule which shows rates of payment for carrying out of items of work
Security	• cash • retention moneys • bonds or inscribed stock or their equivalent issued by a national, state or territory government • an interest-bearing deposit in a bank carrying on business at the address stated in item 9(c), 'Place of business of bank', of annexure part A or, if nothing is stated, the place nearest to where the site is located • an approved unconditional undertaking (the form in annexure part C is approved) or an approved performance undertaking given by an approved financial institution or insurance company • any other form approved by the party benefiting from the security
Separable portion	a portion of the works so identified in the Contract or so directed by the Superintendent
Site	the lands and other places which are to be made available to the Contractor by the Principal for carrying out the Works
Superintendent	the person named in item 5, 'Superintendent', of annexure part A, or appointed by the Principal, and whose address is stated in item 6, 'Superintendent's address' of annexure part A
Superintendent's Representative	a person so appointed by the Superintendent
Survey mark	any mark used for setting out, checking or measuring the work under the Contract
Temporary works	works which are used in carrying out the work under the Contract but which do not form part of the Works (that is, work that is not required to be handed over to the Principal)
The Works	the work to be carried out in accordance with the Contract, including all variations, which is to be handed over to the Principal
Work under the Contract (WUC)	the work to be carried out under the Contract, including all variations, remedial work, plant and temporary works.

'Work' is not defined, except to say that it (whatever that may be) includes the supply of materials.

The following terms, which are also listed in clause 1, are referenced by that clause to specific clauses of the contract and are discussed elsewhere in this or later chapters, where they are of specific importance:

- 'Certificate of practical completion' (see Chapter 9)
- 'Construction program' (Chapter 3)
- 'Contract' (Chapter 1)
- 'Deed of guarantee, undertaking and substitution' (Chapter 2)
- 'Defects' (Chapter 9)
- 'Defects liability period' (Chapter 9)
- 'Dispute' (Chapter 4)
- 'Extension of time' or 'EOT' (Chapter 7)
- 'Excepted risk' (Chapter 2)
- 'Final certificate' (Chapter 9)
- 'Final payment' (Chapter 9)
- 'Final payment claim' (Chapter 9)
- 'Latent condition' (Chapter 3)
- 'Prescribed notice' (Chapter 3)
- 'Progress certificate' (Chapter 8)
- 'Provisional sum' (Chapter 5)
- 'Public liability policy' (Chapter 2)
- 'Selected subcontract work' (Chapter 5)
- 'Selected subcontractor' (Chapter 5)
- 'Test' (Chapter 3)
- 'Variation' (Chapter 6).

CONTRACTUAL OBLIGATIONS

As we saw earlier in the 'Overview', a contract is a voluntary agreement between two parties, entered into for mutual benefit. Any such agreement confers rights and imposes obligations on both parties in accordance with the terms in which it is couched. These rights and obligations are by definition complementary, in that one party's right is the other party's obligation. Rights and obligations under a contract need to be interpreted in the context of the laws that govern the contract. These laws are usually the laws of the state or territory of Australia in which the site is located. The parties also have an obligation to comply with all relevant legislation and with the requirements of all statutory authorities having jurisdiction over the works.

The principal obligation of the contractor is to complete the work by the date for practical completion. Conversely, the principal obligation of the owner is to pay the contractor the agreed lump sum price in return for having done so. Consequently, to enable this

process to take place, the owner must give possession of the site to the contractor by the date for possession, and the contractor must return possession of the site to the owner upon the date of practical completion.

To ensure that the contract is executed by the parties which enacted it and not by their proxies – who might not have the same financial or technical resources nor the same degree of commitment to their obligations as the contracting parties – neither party is permitted to assign (that is, sign over) its rights and obligations under the contract to a third party without the approval of the other party to the contract.

There is no substantive difference between MW-1 and AS4000 as to the contractual obligations of the parties. However, MW-1 minutely documents throughout the requirements for compliance by the parties with the provisions of the GST Act. The absence of such requirements in AS4000 does not imply that the parties are exempted from the provisions of the Act.

MW–1: clauses A1–A5; N2; R3; R7–R10; R13

The contractor and the owner must act reasonably, must co-operate with the other party in its activities under the contract, and must avoid obstructing those activities. This requirement does not affect any contractual right or responsibility (*clause A1*).

The contractor's obligations (*subclause A2.1*) are to:

- commence the works within ten working days after being given possession of the site
- carry out the works diligently and in accordance with the contract
- obtain any approvals from statutory bodies that may be required for the works from commencement to completion
- bring the works to practical completion by the date for practical completion (see Chapter 9)
- comply with any instruction from the architect (see Chapter 3), including immediately complying with any urgent instruction
- comply with all other obligations under the contract, including any relevant legislation.

The contractor must immediately inform the architect and the owner if it is likely to become incapable of carrying out its obligations under the contract (*subclause A2.2*).

The contractor warrants (that is, guarantees) that it is legally capable of entering into the contract, and that it is technically and financially capable of carrying out its obligations under the contract (*subclause A3.1*).

The contractor also warrants (*subclause A3.2*) that it:

- has been allocated the Australian Business Number (ABN) stated in item 1, 'Execution of the contract' of the 'Introduction' for taxation purposes; and that it is registered for GST
- is licensed or registered to carry out the works in accordance with the relevant legislation of the state or territory in which the site is located, under the license or registration number shown in item 1 of the 'Introduction'
- will promptly advise the owner of any change in its ABN, GST registration or the status of its licence or registration (meaning, if any of these changes or is cancelled).

The owner's obligations (*subclause A4.1*) are to:

- obtain from statutory authorities and give to the contractor any approvals from statutory bodies required to commence the works
- obtain from neighbouring owners any 'easements' required before the works can commence
- give possession of the site to the contractor in accordance with the contract
- pay the contractor the contract price
- comply with all other obligations under the contract.

Obtaining easements means gaining right of way over adjoining ground. This may be required for construction of permanent structures or for modifications to existing services or any other work that in some way modifies the adjoining property, such as underpinning, or work that of necessity must take place on adjoining land, inside an adjoining building or in the space above either.

The owner must appoint an architect to design, document and administer the works and must indemnify the contractor against any liability arising from any action or inaction on the part of the architect or of any other consultant engaged by the owner for the works (*subclause A4.2*).

The owner must immediately inform the architect and the contractor if it is likely to become financially incapable of carrying out its obligations under the contract (*subclause A4.3*; and see *subclause A4.1* above).

The owner warrants that it has legal authority over the site and is financially capable of carrying out its obligations under the contract. The name of any lending institution financing the works must be entered in item 1, 'Execution of the contract', of the 'Introduction' (*subclause A5.1*).

The owner also warrants (*subclause A5.2*) that:

- the ABN stated in item 1, 'Execution of the contract', of the 'Introduction' is correct
- it will advise the contractor if it is *not* registered for GST
- it will promptly advise the contractor of any change in or cancellation of either its ABN or registration.

The owner must pay the contract price to the contractor progressively, in accordance with the contract (*clause N2*).

Neither party may assign any right under the contract over the reasonable objections of the other (*clause R3*).

Either party or the architect may 'waive' (that is, unilaterally surrender) its right to a course of action that is open to it under the contract. Failure to exercise that right does not constitute such a waiver. Any waiver given applies *only* to a particular obligation or right, and then *only* to the particular occasion in respect of which the waiver was given (*clause R7*).

The law which governs the contract is the law of the state or territory of Australia stated in item 28, 'Governing law', of schedule 1, 'Contract information'; or, if nothing is stated, the law of the state or territory of Australia in which the site is located. This does not preclude the right of appeal to Federal courts (*clause R8*).

Both parties must comply with all legal or other requirements of all statutory authorities having jurisdiction over the works (*clause R9*).

The contractor must promptly notify the architect if any newly passed or amended law requires a change in the works, and must give the architect details of the effect on the works. The architect must then promptly issue an instruction to the contractor (*clause R10*).

The owner must pay any duty payable in connection with the contract (*clause R13*).

AS4000: subclauses 1(e–h); 2.1; 9.1; 11.1–11.2; clause 43

Communications between the parties and the Superintendent must be in English (*subclause 1(e)*, p 4).

Measurement of quantities must be in legal units of measurement of the place stated in item 8, 'Governing law', of annexure part A; or, if nothing is stated, of the jurisdiction in which the site is located (*subclause 1(f)*, p 4).

Unless otherwise stated, prices are in the currency stated in item 9(a), 'Currency', of annexure part A; or, if nothing is stated, of the jurisdiction in which the site is located. Payment must be made in the above currency at the place stated in item 9(b), 'Place for payments', of annexure part A; or, if nothing is stated, at the Principal's address (*subclause 1(g)*, p 5).

The law governing the Contract and all matters arising out of it is the law of the place stated in item 8, 'Governing law', of annexure part A; or, if nothing is stated, of the jurisdiction in which the site is located (*subclause 1(h)*, p 5).

The Contractor must complete the work under the Contract; and the Principal must pay the Contractor the agreed lump sum and/or the product of measured quantities at the agreed rates, plus or minus any additions or deductions under the Contract (*subclause 2.1*).

Neither party may assign the Contract or any other related right, benefit or interest without the other party's approval (*subclause 9.1*).

The Contractor must comply with all legislative requirements (*subclause 11.1*) *other* than those which are:

- listed in item 19(a), 'Legislative requirements – Those excepted', of annexure part A; or
- to be satisfied by or on behalf of the Principal.

If the Contractor incurs more or less cost because of a legislative requirement which comes into effect less than 14 days before the close of tenders and which necessitates any change to:

- the Works
- any part of the work under the Contract stated in item 19(b), 'Legislative requirements – Identified WUC', of annexure part A; or
- in a fee or charge, or payment of a new fee or charge

then the Superintendent must assess the difference, and add it to or deduct it from the contract sum (*subclause 11.2*).

In principle, none of the terms of the Contract may be changed in any way without the prior consent of the parties (*clause 43*).

THE CONTRACT DOCUMENTS

The contract documents are those documents which together constitute the contract. These may include:

- the completed contract form
- the specification
- the drawings
- the bill of quantities
- other documents, either listed in the contract (MW-1) or which the owner is contractually obliged to provide to the contractor (AS4000).

These are referred to collectively throughout this book as 'the contract documents'.

Neither MW-1 nor AS4000 directly defines the contract documents. MW-1 indirectly defines them by stipulating the order of precedence of contract documents, and also by prescribing the number of copies of each document that the owner must give the contractor. While AS4000 does not stipulate an order of precedence, it also indirectly defines the contract documents by prescribing the number of copies of each document that the owner must give to the contractor.

MW-1 stipulates the order of precedence of contract documents that is to apply to the resolution of discrepancies and inconsistencies

in the documents, and that larger scale or detail drawings are to be given precedence over smaller scale or general drawings. Both MW-1 and AS4000 also stipulate that figured dimensions are to be given precedence over scaled dimensions.

The effect of this is that whatever is contained in any of the contract documents is as binding as if it were contained in all, unless it is contradicted by application of the rules of precedence. Any inconsistency or ambiguity in the contract documents that cannot be resolved by applying the rules of precedence is to be resolved by the contract administrator.

Specifications and drawings are a virtual prerequisite for a lump-sum building and construction contract. The status of the bill of quantities, however, is somewhat less clear-cut. While AS4000 allows the owner to determine the contractual status of a bill of quantities in either of two ways (discussed in greater detail below under 'Quantities'), MW-1 is predicated on any bill of quantities, if provided, *not* forming part of the contract.

The owner is required to supply to the contractor the prescribed number of copies of the contract documents. Documents issued by the owner to the contractor remain the property of the owner, and may not be used by the contractor for any purpose other than the contract.

AS4000 also covers situations, such as where design of part of the works is to be carried out by the contractor, in which the contractor is required to supply documents to the owner. Documents issued by the contractor to the owner in these circumstances become the property of the owner, but may not be used by the owner for any purpose other than the contract. Both parties are required to guarantee that their documents have not infringed any patent or copyright.

During the construction phase, AS4000 requires the contractor to keep at the site, and available for inspection, one complete set of all contract-related documents, irrespective of their source, and to keep relevant documents wherever work is being assembled or manufactured off the site.

MW-1 restricts both parties from disclosing confidential information, and requires the contractor to seek the owner's permission before disclosing its contractual relationship with the owner. AS4000 provides a similar but optional clause which, if invoked, restricts the disclosure of confidential information and the issue of media releases by the contractor.

MW-1: clauses B1–B4; R4–R6; R11–R12

Both parties must promptly notify the architect of any discrepancy in the contract documents. The architect must then promptly give the contractor an instruction resolving any discrepancy, with a copy to the owner (*clause B1*).

The 'Order of precedence of contract documents' is stated in schedule 3; or, if no order is stated, the order of precedence (*clause B2*) is:

1 any special conditions stated in schedule 2, 'Special conditions'
2 the conditions of the contract, including the 'Introduction' and schedule 1, 'Contract information'
3 the specifications, in the order in which they are listed in schedule 3
4 the drawings listed in schedule 3, but with large-scale drawings taking precedence over small-scale drawings
5 any other documents, in the order in which they are listed in schedule 3.

The contractor may recover any cost it incurs as a result of an architect's instruction which has been given to resolve a discrepancy in the contract documents, if the discrepancy is resolved *other* than in accordance with the order of precedence of documents (*subclause B3.1*). The contractor may treat any such architect's instruction as an instruction for a variation (*subclause B3.2*).

The contractor and the owner must promptly give the architect a copy of any document in their possession that relates to the work under the contract. The architect must, likewise, promptly give the contractor a copy of any such document in its possession. Relevant documents include statutory approvals, approvals by providers of services to the site and by persons such as building surveyors or inspectors, and any other documents required under relevant legislation (*clause B4*).

The contract is complete in itself and does not incorporate any earlier agreement or communication between the parties or their agents (*clause R4*).

Acquisition by another person of ownership of one of the parties, or assignment to another person of the party's rights and obligations under the contract, both transfer the party's rights and obligations under the contract to that person. They do not affect the continuity or validity of the contract (*clause R5*).

Any clause or part of a clause that is illegal, unenforceable or invalid – as long as it does not 'go to the heart of the contract' (and therefore render the whole contract illegal, unenforceable or invalid) – must be treated as removed from the contract without affecting the rest of the contract (*clause R6*).

The provisions of the contract must be construed and interpreted in accordance with the text of the clauses, without reference to headings (*clause R11*).

The parties must not disclose any information received from each other that is marked as confidential, except where required by law (*subclause R12.1*). The contractor must not disclose its contractual

relationship with the owner without the owner's permission, which must not be unreasonably withheld (*subclause R12.2*). The contractor must bind its subcontractors by similar conditions to the above. The owner's permission of disclosure, when given to the contractor, also applies to the subcontractors unless the owner specifically states otherwise (*subclause R12.3*).

AS4000: subclauses 1(c–d); clauses 6, 8 and 10

The contract must be interpreted in accordance with the text of the clauses, without reference to headings (*subclause 1(c)*, p 4). The use of singular and plural words, or masculine and feminine words, is interchangeable as to number and gender depending on the context (*subclause 1(d)*, p 4).

The 'contract' means the agreement in writing and all related documents referred to in the agreement. If the Contract requires a formal instrument of agreement to be executed (that is completed and signed) by the parties, then the Principal must prepare and send two copies of such a document to the Contractor within 28 days after acceptance of the Contractor's tender. The Contractor must then execute and return the document to the Principal within 14 days, whereupon the Principal must likewise execute both copies, pay any stamp duty, and forward one copy to the Contractor within a further 14 days. The Superintendent may extend the times for this procedure (*clause 6*).

Where a discrepancy exists between figured and scaled dimensions, the figured dimensions take precedence. The party which discovers any inconsistency, ambiguity or discrepancy in the contract documents must notify the Superintendent. The Superintendent must direct the Contractor as to the interpretation of the documents which must be adopted. If the Superintendent's direction causes the Contractor to incur more or less cost, then the Superintendent must assess the difference, and add it to or deduct it from the contract sum (*subclause 8.1*).

The Principal must supply to the Contractor the stated number of copies of the documents listed in item 15, 'Principal-supplied documents', of annexure part A. If nothing is stated, the Principal must supply five copies of the drawings, specification, bill of quantities, and schedule of rates. These documents remain the property of the Principal and must be returned on request. No such document may be used for any purpose other than the Contract (*subclause 8.2*).

The Contractor must supply to the Principal the stated number of copies of the Contractor-supplied documents listed in the Contract (presumably in annexure part A). The Superintendent is not obliged to check the documents for accuracy or compliance with

the Contract, for which the Contractor remains responsible. If the Contractor is obliged to obtain the Superintendent's direction as to whether the documents are suitable, then the Superintendent must give a direction within the time stated in item 16, 'Time for Superintendent's direction about documents', of annexure part A. If nothing is stated, then the Superintendent must give a direction within 14 days. The Superintendent must give reasons for a direction that a document is not suitable. These documents become the property of the Principal, but may not be used for any purpose other than the Contract (*subclause 8.3*).

The Contractor must keep at the site one complete set of all documents supplied by the Principal, by the Contractor and by the Superintendent. These documents must be available at all times to the Principal and the Superintendent. Where work is being manufactured or assembled off the site, the Contractor must keep at that place a set of the relevant documents, available under the same conditions (*subclause 8.4*).

Documents or other things supplied by either party and identified as confidential must be kept confidential. The parties (including the Superintendent if the Contractor wishes) must agree formally to refrain from disclosing any confidential matter, even after the completion or termination of the Contract, if either party so requires (*subclause 8.5*).

The Contractor may not disclose any information about the project to the media without the Principal's prior approval. The Principal's approval must not be unreasonably withheld (*subclause 8.6*). This clause is optional, and the Principal may delete it prior to the signing of the Contract.

The Principal warrants that nothing specified, provided or directed in the Contract, or provided or directed by either the Principal or the Superintendent, will infringe any intellectual property right. The Contractor likewise warrants that nothing provided by it will infringe any intellectual property right. Each party must indemnify the other against such infringements (*clause 10*).

THE WORKS

'Work' is not a contractual term and should, therefore, be understood in its normal everyday sense of 'the application of effort to some purpose', and interpreted according to its context. AS4000, however, states that 'work' also includes the supply of materials.

'The works', on the other hand, is a generic term for the work to be completed under the contract. AS4000 adds that it includes all variations and is specifically the work that is to be handed over to

the owner, presumably to distinguish 'the works' from 'the work under the contract'. AS4000 effectively defines the latter term as 'the works' plus remedial work, plant and temporary works – the last two of which quite obviously are *not* to be handed over to the owner. The term 'the necessary work', while it is used throughout MW-1, is nowhere defined but may be taken to be identical to 'the work under the contract' in AS4000.

Separable parts or portions of the works may be defined by the owner prior to tender. Although neither MW-1 or AS4000 states this clearly, both contracts provide in their respective appendices a form for such a contingency. This form is required to be completed, showing the individual contractual dates and amounts that apply to each separable part. AS4000 also allows the contract administrator to direct *additional* separable parts prior to practical completion (see Chapter 9).

MW-1: section S; clauses G1–G2; M1

As we saw earlier, the 'works' means the completed construction in accordance with the contract documents (*section S*).

The owner must give the contractor sufficient information to properly set out the works (*clause G1*; see also Chapter 3).

The contractor must (*subclause G2.1*):

- set out the works and engage a licensed surveyor to certify that the works are properly set out (see Chapter 3)
- direct the manner in which the necessary work is carried out (that is, be responsible for the construction methods used in constructing the works, for co-ordinating the works and for the sequence in which the works are constructed)
- supervise the necessary work competently (that is, ensure its completion in accordance with the contract)
- establish and manage satisfactory industrial relations in connection with the works
- establish and manage a satisfactory occupational health and safety system on the site.

If the owner has any requirements for a quality assurance system, these must be stated in item 12, 'Quality assurance system', of schedule 1, 'Contract information'. The contractor must have in place any such quality assurance system before taking possession of the site; and must inspect, test, record and rectify defects accordingly (*subclause G2.2*).

Separable parts of the works are listed in item 22, 'Separable parts', of schedule 1, 'Contract information'. These are parts of the works to which separate dates for practical completion, defects liability periods and liquidated damages apply (*subclause M1.3*).

AS4000: clauses 1 and 4

As we saw earlier (*clause 1*):

- **'Work' is not defined, except to say that it includes the supply of materials**
- **'The Works' means the work to be carried out in accordance with the Contract, including all variations, which is to be handed over to the Principal**
- **'Temporary works' means works which are used in carrying out the work under the Contract but which do not form part of the Works (that is, works that are not required to be handed over to the Principal)**
- **'Work under the Contract' (WUC) means the work to be carried out under the Contract, including all variations, remedial work, plant and temporary works (that is, all of the above).**

'Separable portions' of the Works are identified in annexure part A, or directed by the Superintendent. A separate page of the annexure must be completed for each, showing the separate date for practical completion and the respective amounts which apply for:

- **security (Chapter 2)**
- **bonuses and liquidated damages (Chapter 9)**
- **delay damages (Chapter 7).**

Each of these must be calculated as the proportion of the total amount that the value of the separable portion bears to the contract sum (*clause 4*).

THE SITE

The site is that part of the owner's land on which the work of the contract is to be carried out. The site, therefore, means the land on which the completed works will stand, as well as any additional storage and parking areas which are also made available by the owner to the contractor. It does not include adjacent areas which may belong to the owner, or may even be on the same title as the site, but which are *not* made available to the contractor; nor does it include 'off-site' manufacturing and fabrication facilities.

The owner is required to give the contractor possession of the site by the date for possession stated in the contract. The contractor retains possession until the works are handed over to the owner at practical completion (see Chapter 9). AS4000, however, allows the owner to refuse possession to the contractor if the latter has not effected the required insurances, and expressly prohibits the contractor from using the site for any other purpose. MW-1 also emphasises the owner's responsibility for providing the contractor with accurate site information, and the contractor's responsibility for examining the site information and inspecting the site.

The contractor is required to allow the owner and the owner's representatives reasonable access to the site. MW-1 extends this to include other locations where the work of the contract is taking place, including the contractor's 'off-site' manufacturing and fabrication facilities.

MW-1: section S; clauses F1–F4

As we saw above, 'site' means all places which are made available by the owner to the contractor for the construction of the works and related purposes, as described in item 7, 'The site of the works', of the 'Introduction' (*section S*). This may or may not be the entire area to which the owner has title.

The owner must give the contractor possession of the site by the date shown in item 11, 'Date by which the owner must give contractor possession of the site', of schedule 1, 'Contract information' (*subclause F1.1*).

The owner need not give the contractor possession of the site (*subclause F1.2*) until:

- **it or the architect has received a copy of the contract executed by both parties**
- **it is satisfied that the contractor has effected all required insurances.**

The contractor must (*clause F2*):

- **give the owner, the architect, separate contractors, consultants and the owner's lender reasonable access to the site and to other locations where work is taking place**
- **keep the site clean and tidy at all times.**

The owner warrants that it has previously given the contractor all site information in its possession (*subclause F3.1*). 'Site information' means all descriptive and technical information relating to the site and its condition, both above and below ground, as listed in schedule 4, 'Site information' (*subclause F3.2*).

The contractor must have previously examined the site information and inspected the site, and may rely on the site information to the extent that is reasonable in the circumstances (*subclause F4.1*). The contractor must indemnify the owner against any claim arising from the contractor's failure to examine the site information or inspect the site (*subclause F4.2*).

AS4000: clauses 1 and 24

As we saw above, 'site' means the lands and other places which are to be made available to the Contractor by the Principal for the execution of the Works (*clause 1*). This may or may not be the entire area to which the owner has title.

The Principal must give the Contractor possession of a sufficient

portion of the site to commence work under the Contract within the time stated in item 22, 'Time for giving possession', of annexure part A; or, if nothing is stated, within 14 days of the date of acceptance of tender. The Principal must then continue to give the Contractor possession of the remainder of the site as and when necessary for the execution of the work under the Contract. While a delay in giving the Contractor possession does not immediately constitute a substantial breach of the Contract, failure to rectify such a delay does (see Chapter 4). The Principal may refuse to give the Contractor possession of any part of the site until the Contractor has provided proof of insurance. The Contractor may not use the site for any purpose other than the Contract without the Superinten-dent's approval (*subclause 24.1*).

The Contractor must give the Principal and the Principal's employees, consultants and agents reasonable access to the site after receiving reasonable notice. The Principal must notify the Contractor of the identity and role of any persons engaged to carry out work on the site (that is, separate contractors). The Contractor must then permit these persons to carry out their work and co-operate with them. The Principal must ensure that none of the persons given access to the site or the work under the Contract impedes the Contractor. The Contractor must also give the Superintendent reasonable access to the work under the Contract at all times (*subclause 24.2*).

QUANTITIES

The complexity of building and construction projects is such that, in order to submit an accurate and competitive tender, the contractor needs to know in detail the quantities of all work, materials, goods and components to be incorporated in the works. From these, the contractor is able to derive quantities of the associated labour and constructional plant, as well as any necessary temporary work.

That is to say, the contractor needs to have access to the quantified scope of the project. This can be obtained in any of four ways:

1. **the contractor (or an employee) measures the quantities for the contractor's sole use**
2. **the contractor commissions another party (usually a consultant quantity surveyor) to measure the quantities for the contractor's sole use**
3. **the owner (or an employee) measures the quantities and provides them to all tenderers**
4. **the owner commissions another party to measure the quantities and provides them to all tenderers.**

In cases 1 and 2 above, it is clear that the contractor is at liberty to

determine the format and level of detail of the measurement. In cases 3 and 4, on the other hand, the owner is obliged to carry out the measurement in a prescribed manner and to a prescribed level of detail (where an appropriate standard exists), so that no tenderer is disadvantaged by any idiosyncrasy on the part of the measurer.

Quantities may be provided by the owner in either of two forms:

- **a bill of quantities**
- **a schedule of rates.**

Bills of quantities

The bill of quantities, or priced bill of quantities, is a document which states the measured quantities of work to be done and which has been:

- **supplied by the owner to the contractor for tendering purposes**
- **priced and extended by the contractor so that the total equals the contract price for the work included.**

While provision of a bill of quantities by the owner to the contractor is optional under AS4000. MW-1 is predicated on any bill of quantities, if provided, not forming part of the contract.

AS4000 allows the owner to determine the contractual status of the bill of quantities in either of two ways:

- **as a contract document**
- **as a non-contract document.**

The bill of quantities may be used, depending on its contractual status, for preparing:

- **tenders**
- **variations (see Chapter 6)**
- **progress claims (see Chapter 8)**
- **remeasured bills of quantities.**

In the event of an error or omission in a bill of quantities which is a contract document, the contract sum is adjusted accordingly (see Chapter 6).

MW-1

MW-1 is predicated on any bill of quantities, which the owner may issue with the tender documents for the information of tenderers, *not* forming part of the contract.

If, however, the owner wishes to issue a bill of quantities with the tender documents for any other purpose, the contract must be amended to that effect. Such amendment would require:

- the inclusion of the bill of quantities in schedule 3, 'Order of precedence of contract documents'
- the inclusion of a clause or clauses in schedule 2, 'Special conditions', stating:
  - the extent to which the bill of quantities will form part of the contract
  - how it will be administered.

AS4000: subclauses 2.2–2.4

The status of the bill of quantities is defined as one of two standard alternatives:

- Alternative 1 – the bill of quantities forms part of the Contract and must be priced
- Alternative 2 – the bill of quantities does not form part of the Contract.

The alternative which applies is stated in item 10(a), 'Bills of quantities – Alternative applying', of annexure part A; or, if nothing is stated, Alternative 1 applies. If Alternative 2 applies, the bill of quantities either must or must not be priced, according to whether either the word 'yes' or the word 'no' is deleted in item 10(b), of annexure part A. If nothing is deleted, the bill of quantities must *not* be priced (*subclause 2.2*).

All items in the bill of quantities must be priced and extended (that is, their unit price multiplied by the quantity) by the Contractor, and the total of the extensions must equal the contract price for the work included. The Contractor must lodge the priced bill of quantities with the Superintendent by the time stated in item 10(c), 'Bills of quantities – Lodgement time', of annexure part A; or, if nothing is stated, by 28 days after acceptance of tender. The Principal is not obliged to make any payment to the Contractor until the priced bill of quantities is lodged. If the total of the priced bill of quantities does not equal the contract price for the work included, the error must be corrected by agreement between the parties within seven days; or, failing agreement, as determined by the Superintendent (*subclause 2.3*).

Quantities in the bill of quantities are estimates. A difference between the quantity of an item in the bill of quantities and the quantity required to complete the works produces a deemed variation, which does not require a Superintendent's direction (*subclause 2.4*).

SCHEDULES OF RATES

Like a bill of quantities, a schedule of rates states the measured quantities of work to be done. However, it differs from a bill of quantities in a number of significant respects:

- it tends to be measured in groups of related work (for example, a single item for excavation of trench in earth, supply and installation of drainage pipe and backfilling with crushed rock) rather than in discrete items
- there is no standard applicable to its measurement
- the work is remeasured as constructed and payment is made on the basis of the remeasurement.

There are two types of schedules of rates in common use:

- a complete schedule of all the work to be done, usually quantified
- a schedule of contingency work, quantified or not as the case may be.

Contingency work (for instance, backfilling a drainage trench with weak concrete in lieu of crushed rock) is work to be done if necessary in addition to work which was:

- included in a lump sum contract without quantities
- measured in the complete schedule, as above
- measured in the bill of quantities.

The correction of any errors in a schedule of rates is dealt with in Chapter 6.

While AS4000 provides a definition of a schedule of rates, MW-1 does not. However, if the quantity of an item of work is not known at the time of tendering, the owner commonly includes in the contract (generally in the bill of quantities) a provisional quantity of the item. The contractor must submit in its tender a rate for the item, which is later used in valuations of the work done.

AS4000: subclause 2.4

A schedule of rates is defined as a schedule which shows rates of payment for carrying out items of work. Quantities in the schedule of rates are estimates. A difference between the quantity of an item in the schedule of rates and the quantity required to complete the works produces a 'deemed variation' (*subclause 2.4*; and see Chapter 6).

SPECIAL CONDITIONS

It may be necessary to add a special condition to a standard contract. This may be due to some unique feature of the project, or to the way in which it is to be carried out. It may equally be due to a particular requirement of the owner, to the economic circumstances of the time, or to a particularly lengthy project.

Under MW-1, there are three categories of special condition: two specific and one general. These three questions are posed in item 3,

'Special conditions for houses and dwellings, the owner remaining in occupation and other special conditions', of the 'Introduction':

1 **Do the works described in item 6 of the 'Introduction' require domestic building work (or equivalent)?**
2 **Will the owner remain in occupation?**
3 **Are there any other special conditions?**

If the answer to Question 1 is 'yes', then the special conditions of the state or territory in which the site is located apply. If the answer to Question 2 is 'yes', then the standard special conditions provided in schedule 2, 'Special Conditions', apply. If the answer to Question 3 is 'yes', then the additional special conditions inserted by the owner into schedule 2 apply.

The most commonly used special condition not specifically provided for in item 3 is generally referred to as 'Rise and fall'. This condition provides for progressive cost adjustment to compensate for fluctuations in the cost of labour and materials (see Chapter 8). Another common special condition requires the contractor to provide financial security for its obligation to pay nominated subcontractors (see Chapter 5).

Under AS4000, deletions, amendments and additions to the Contract may be recorded in annexure part B, 'Deletions, amendments and additions'. The standard optional clauses relating to media releases by the Contractor and quality assurance may be deleted from the Contract, either by striking them out in the body of the document or by recording them as deleted in annexure part B, without making consequential amendments.

APPENDIX

The appendix to a building and construction contract combines and thereby highlights all the potentially variable factors relating to the project. Thus, the appendix lists all the *standard* variables in an unamended standard contract.

The appendix of MW-1 comprises:

- **the 'Introduction'**
- **schedule 1, 'Contract information'**
- **schedule 2, 'Special conditions'**
- **schedule 3, 'Order of precedence of contract documents'**
- **schedule 4, 'Site information'**
- **schedule 5, 'Form of unconditional guarantee'**
- **schedule 6, 'Provisional sums'**
- **schedule 7, 'Prime cost sums'**
- **schedule 8, 'Items to be supplied by the owner for incorporation in the works'.**

AS4000's appendix consists of:

- annexure part A (untitled, but roughly equivalent to schedule 1 of MW-1)
- annexure part B, 'Deletions, amendments and additions'
- annexure part C, 'Approved form of unconditional undertaking'.

Non-standard variables which the owner wishes to incorporate in the contract may be dealt with in either of two ways:

- amendment of the standard text of the contract; or
- insertion of new clauses into the contract.

Under MW-1, the second option may be exercised by inserting any new clause into schedule 2. Under AS4000, all deletions, amendments and additions to the contract may be recorded in annexure part B.

REVIEW

A building and construction project is made up of a complex network of activities which involves a large and fluctuating workforce that comprises the contractor's as well as subcontractors' employees. Because of its complexity and relatively long lifespan, the project requires specialised, detailed contract documentation. This may be provided either by way of a tailored, or purpose-made, contract; or of a standard form of building and construction contract. Standard contracts are available to suit a wide variety of project types and contractual arrangements and a suitable contract may be selected from these to suit the project in question.

The major obligation of the contractor is to complete satisfactorily the work of the project by the date for practical completion. The corresponding responsibility of the owner is to pay the contractor the contract sum in exchange. Neither the owner nor the contractor may sign over their rights under the contract to a third party without the approval of the other party to the contract.

The contract documents, whether or not formally identified as such, are:

- the completed and signed contract form
- the specification
- the drawings
- the bill of quantities
- any other documents listed in the contract.

The contract documents are to be read as a whole, so that any information contained in one is treated as if it were contained in all.

The owner is required to give possession of the site to the contractor by the date for commencement, and the contractor is required to return possession of the site to the owner on the date of practical completion. The contractor is required to allow the owner and the owner's representatives reasonable access to the site. The contractor is also required to notify the contract administrator if the conditions encountered on the site differ from those described in the contract.

A bill of quantities may be used for preparing tenders, variations and progress claims, depending upon its contractual status. MW-1 makes no reference to a bill of quantities. Under AS4000, a bill of quantities, if issued by the owner for tender purposes, may or may not be a contract document.

Special conditions may be inserted in the contract by incorporating them in the section of the document provided for that purpose.

An appendix, usually at the back of the contract, collects for convenient reference all the factors that may vary from one project to another.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- 'Introduction'
- section A, 'Overview' (clauses A1 to A5)
- section B, 'The contract documents' (clauses B1 to B4)
- section F, 'The site' (clauses F1 to F4)
- section G, 'Building the works' (clauses G1 and G2)
- section M, 'Completion of the works' (clause M1)
- section N, 'Payment for the works' (clause N2)
- section R, 'Miscellaneous' (clauses R3 to R11 and R13)
- section S, 'Definitions' (whole section)
- schedule 1, 'Contract information'
- schedule 2, 'Special conditions'
- schedule 3, 'Order of precedence of contract documents'
- schedule 4, 'Site information'.

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- clause 1, 'Interpretation and construction of Contract' (whole clause)
- clause 2, 'Nature of Contract' (subclauses 2.1 to 2.4)
- clause 4, 'Separable portions' (whole clause)
- clause 6, 'Evidence of Contract' (whole clause)
- clause 8, 'Contract documents' (whole clause)
- clause 9, 'Assignment and subcontracting' (subclause 9.1)
- clause 10, 'Intellectual property rights' (whole clause)

- clause 11, 'Legislative requirements' (whole clause)
- clause 24, 'Site' (subclauses 24.1 to 24.2)
- clause 43, 'Waiver of conditions' (whole clause)
- annexure part A
- annexure part B.

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- chapter 1, 'The building team'
- chapter 3, 'Procedure from brief to tender'
- chapter 5, 'Drawings and schedules'
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- chapter 3, 'Building procurement: Alternative methods'
- chapter 6, 'The contract'.

REVIEW QUESTIONS

1.1 Explain the identity of and relationship between the parties to a building and construction contract. Explain also their relationships with other persons or companies involved in the project.

1.2 What are the requirements and related responsibilities under the contracts studied for resolving the differences between the actual condition of the site and the information in the contract documents?

1.3 What is involved in a building project, and how does it differ practically and contractually from other commercial transactions with which the owner might be more familiar? Explain the criteria on which to choose between a standard and a tailored contract.

1.4 Describe the range of standard building and construction contracts that are available to the owner, and the criteria for selecting a suitable form of contract from among them.

1.5 What are the obligations of, and the limitations on, the owner and the contractor?

1.6 What constitutes the contract documents under the contracts

studied? Explain how the documents are interrelated, and how they are affected by copyright.

1.7 Explain the significance, under the contracts studied, of the terms 'work', 'the works', and 'the work under the contract'. What are the respective responsibilities of the parties for the work of the project?

1.8 What constitutes the 'site' under the contracts studied? Explain the requirements for legal possession of the site, and for access to the site by the party not in possession.

1.9 Describe the nature of a bill of quantities under the contracts studied, and how it is used in a project.

CHAPTER 2

INSURANCE AND SECURITY

OVERVIEW

Risk is an integral part of all business activity. Financial loss is not only the major risk any business faces, but is also a frequent outcome when other risks eventuate. The building and construction industry is no exception; its particular concerns being claims by third parties for damages, and claims arising from failure by the contractor to complete the work, to complete it satisfactorily or to complete it on time.

The parties to a building and construction project also usually require each other to provide protection from the risk of exposure to unforeseen costs incurred as a result of the other party's activities, including legal claims by third parties. This protection, called 'indemnity', is *not* a form of insurance. It simply means that each party undertakes to accept full financial and other responsibility for all such costs and claims arising out of its own activities during the life of the project, irrespective of whether the costs are initially incurred by, or the claims initially made against, itself or the other party. In particular, it means that the contractor undertakes not to pass on such costs and claims to the owner on the grounds that the contractor is merely the owner's agent.

However, even though the contractor may have agreed to indemnify the owner against a risk, that indemnity might be worth very little if the contractor gets into financial difficulties and becomes unable to meet the associated costs. Since insurance against anticipated risk to one's assets is simply prudent management of those assets, it makes very good business sense for the owner to have insurance of the very same risks against which the contractor is required to indemnify the owner. Indeed, insurance of all major insurable risks is mandatory.

Contractors are routinely required to indemnify owners against damage to the works, and against claims from third parties for damage to property and for personal injury or death. Insurance of these risks is a routine requirement in building and construction contracts. Contractors are *not* required to indemnify owners against claims from the contractors' own employees for personal injury or death. However, insurance of these risks, too, is a routine requirement in building and construction contracts.

It should be noted that not all risks are insurable and, hence, even a fully insured contractor may well be out of pocket after indemnifying the owner for costs that are not claimable under either mandatory or elective insurance policies.

Another risk to which the owner of a building or construction project is exposed is that of the contractor failing to perform its obligations under the contract. This may present as failure to meet one or more of the project objectives in terms of time, quality and cost – depending on the nature of the contract. Contractors, therefore, are routinely required to provide financial security for the performance of their contractual obligations. Security commonly comprises either an up-front cash deposit, or the retention of a percentage of all payments to which the contractor becomes entitled, or a combination of both, up to a fixed percentage of the contract sum.

Thus, contractors who are either obliged to provide cash security or are subjected to deduction of retention will, in all cases, tend to be out of pocket until close to the completion of a project. From this tendency derives the widespread practice by contractors of lodging guarantees from a bank for the sums required in lieu of cash security and retention. This results in contractors paying the bank a relatively low rate on the notional sums guaranteed, instead of a relatively high overdraft rate on the borrowed equivalent of the all too real sums deposited.

Contractors are also exposed to the risk of owners failing to perform their obligations under the contract. This is mainly failing to pay the contractor when required to do so. Owners, therefore, may also be required to provide up-front deposit security for the performance of their contractual obligations. This security, too, may be replaced by a bank guarantee.

The guarantor in either instance usually acquires rights over some part of its customer's assets as its own security against the risk of having to pay out the guarantee. The guarantor's security may be simply the fact that the customer has considerable assets lodged with the guarantor; or it may consist of a fixed or floating charge over the customer's company assets, or of a mortgage on the customer's land and buildings.

This chapter presents the reader with a comprehensive view of the contractual requirements for the insurances which must be provided for a building or construction project, and of the security which is required to ensure its proper completion. It also provides some answers to the following frequently asked questions:

- **What are the risks against which the contractor is required to indemnify the owner?**
- **What are the risks which must be insured?**
- **What are the alternative insurance strategies available to the owner? What are their implications?**
- **What is the purpose of security provided by the contractor to the owner or by the owner to the contractor? What manner of security is required?**
- **In what forms may security be provided? In what circumstances is either party entitled to take possession of the security?**

INSURANCE

Liabilities and indemnities

It seems only fair and reasonable that a party to a contract should be responsible for the outcome of events which are within its control, and it should, therefore, also be liable for the costs associated with that outcome. Indemnity is used as a means of protecting one party to a contract from the consequences of the other party's actions.

Since the contractor is responsible for carrying out all project activities, it is required to indemnify, or protect, the owner from all costs and legal consequences arising from events for which the contractor is responsible. This involves the contractor in accepting liability for payment of all costs arising from its project activities that might otherwise fall upon the owner. Thus the contractor is responsible for avoiding, and for the outcome of, any event that causes loss or damage to property, and any personal injury or death as a result of project activities. The contractor's liability, however, is reduced by the proportion in which the event was caused by the owner or those responsible to the owner.

Similarly, the owner accepts liability for payment of all costs arising from its project activities that might otherwise fall upon the contractor. The owner's liability is likewise reduced by the proportion in which the event was caused by the contractor or those responsible to the contractor.

AS4000 also provides a list of 'excepted risks'. These are events that are beyond the contractor's control and which, while not specifically associated with the project may, nevertheless, entail costs to the project. In addition to events which are clearly the owner's

responsibility, such events also include confiscation by a government, nuclear radiation, wars, riots and revolutions. The owner is responsible for the cost of these events.

MW-1: clauses D1–D6

From the date of being given possession of the site until the issue of the notice of practical completion (see Chapter 9), the contractor is responsible for the following risks which arise from the construction of the works and which occur on or adjacent to the site (*clause D1*):

- illness, disease or death of any person
- loss of or damage to the property of any person
- loss of or damage to:
  - the works
  - materials or equipment to be incorporated in the works, including items stated in schedule 8, 'Items to be supplied by the owner for incorporation in the works'
  - plant, tools and equipment.

The contractor must indemnify the owner for all consequences of any act or omission by the contractor or those responsible to the contractor (*subclause D2.1*).

The contractor's liability will be reduced in the proportion that any consequence was due to an act or omission by the owner or those responsible to the owner (*subclause D2.2*).

Unless the contract states otherwise, any amount to be paid by the contractor to the owner as indemnity must be dealt with as follows (*subclause D2.3*):

- the input tax credit to which the owner is entitled must be deducted
- the GST which is payable by the owner must be added.

From the issue of the notice of practical completion, the owner is responsible for the following risks which occur on or adjacent to the site (*clause D3*):

- illness, disease or death of any person
- loss of or damage to the property of any person
- loss of or damage to:
  - the works
  - materials or equipment to be incorporated in the works, including items stated in schedule 8, 'Items to be supplied by the owner for incorporation in the works'.

Note that this list is identical to the list in clause D1 above of risks for which the contractor is responsible before practical completion,

with the exception of plant, tools and equipment, which are in any case the property of the contractor and which the contractor would be required to remove from the site at practical completion.

The owner must indemnify the contractor for all consequences of any act or omission by the owner or those responsible to the owner (*subclause D4.1*). The owner's liability will be reduced in the proportion that any consequence was due to an act or omission by the contractor or those responsible to the contractor (*subclause D4.2*).

Unless the contract states otherwise, any amount to be paid by the owner to the contractor as indemnity must be dealt with as follows (*subclause D4.3*):

- **the input tax credit to which the contractor is entitled must be deducted**
- **the GST which is payable by the contractor must be added.**

From the date of being given possession of the site until the issue of the notice of practical completion, the contractor must promptly make good any loss of or damage (*subclause D5.1*) to:

- **the works**
- **materials or equipment to be incorporated in the works, including items stated in schedule 8, 'Items to be supplied by the owner for incorporation in the works'**
- **plant, tools and equipment.**

Note that this list is identical to the list in clause D1 above of risks for which the contractor is responsible before practical completion, with the exception of plant, tools and equipment, which are the property of the contractor.

The owner must indemnify the contractor for the cost of making good such loss or damage in the proportion that any consequence was due to an act or omission by the owner or those responsible to the owner (*subclause D5.2*).

Upon the issue of the notice of practical completion for a separable part of the works, the owner becomes responsible for all risks relating to that part (*clause D6*).

AS4000: clauses 12; 14–15

The Contractor must take all measures necessary to:

- **protect people and property**
- **avoid unnecessary interference with the passage of people and vehicles**
- **prevent nuisance and unreasonable noise and disturbance.**

The Contractor must promptly make good any damage caused by itself, and pay any compensation required by law. If the Contractor

fails to take the necessary measures, or fails to make good damage or pay compensation, then, after the Superintendent has given the Contractor notice of the Principal's intention, the Principal may take the necessary measures. The Superintendent must certify the cost of these measures, which will then become a debt due from the Contractor to the Principal (*clause 12*).

The Contractor is responsible (*subclause 14.1*) for the care of:

- the work under the Contract, from the commencement of such work *until* the date of practical completion, including:
  - unfixed materials included in a progress certificate
  - materials provided by the Principal
  - subcontractors' materials
- work that is outstanding and items to be removed from the site *after* the date of practical completion until:
  - all such work has been completed and such items removed
  - all tests directed by the Superintendent have been carried out
  - all defective work has been made good.

The Contractor must make good at its own cost any loss or damage to the work under the Contract while the Contractor is responsible for its care, other than in the case of excepted risks (see below). If such loss or damage is caused by an excepted risk, the Contractor must make good the loss or damage, and the cost of making good will be deemed a variation (see Chapter 6). If the loss or damage is *partly* caused by an excepted risk, then only the appropriate proportion of such cost will be deemed a variation (*subclause 14.2*).

The Principal is responsible for the following (*subclause 14.3*):

- negligence by the Principal or those responsible to the Principal
- any risk specifically excepted in the Contract
- war, insurrection and similar events or confiscation by a Government or public authority
- radioactivity from nuclear fuel due to the activities of a third party
- use or occupation of the Works by the Principal or those responsible to the Principal
- design defects other than in a design provided by the Contractor.

The Contractor must indemnify the Principal for loss or damage arising out of carrying out the work under the Contract (*subclause 15.1*), namely:

- loss of or damage to the Principal's property other than the work under the Contract
- claims by any person for personal injury or death or loss of or damage to property.

The Contractor's liability to the Principal is reduced by the proportion in which the Principal and those responsible to the Principal contributed to a particular event. However, the above does not apply:

- where the Contractor's liability is limited by another clause of the Contract
- where the Principal has a right to indemnity under another clause of the Contract
- to the work under the Contract *until* the date of practical completion (since the Contractor is, in any case, obliged to make good such loss or damage) nor to work that is outstanding and items to be removed from the site *after* the date of practical completion (since these are the Contractor's responsibility and the Contractor's property respectively)
- unavoidable damage resulting from construction of the Works
- claims that the Principal had no right to construct the work.

The Principal must indemnify the Contractor (*subclause 15.2*), for claims:

- for unavoidable damage resulting from construction of the Works
- that the Principal had no right to construct the work.

Note the warning in the 'Preface' to AS4000 that clause 15 does not limit the liability of parties for special, indirect or consequential losses under clauses 16 and 17. Note also the advice that parties wishing to limit their liability should seek insurance and legal advice before entering a contract under AS4000.

Insurances to be effected

As we saw earlier, each party is faced with the risk of having to reimburse the other for the costs of events for which the first party is liable and has agreed to provide indemnity. Some of these risks, and certainly the major ones, are insurable and should, therefore, be insured. In the event that a party which had agreed to provide indemnity was unable to pay the costs, and had failed to take out the necessary insurance, the indemnity would be worthless. Consequently, insurance of all major insurable risks is a requirement of all building and construction contracts.

Three areas of insurance are mandatory:

1. the works – that is damage to or destruction of the works
2. public liability – damage to or destruction of the property of, and injury to or death of, persons not employed in the project
3. workers' compensation and employers' liability – injury to or death of workers employed in the project.

There are two methods of effecting the first two of these insurances:

- by the owner; or
- by the contractor.

Insurance of the contractor's employees must be 'effected' by the contractor in all instances (that is, they must take out the insurance policy), since they are clearly the exclusive responsibility of the contractor. This allows the contractor the flexibility of insuring either the workers on a *particular* site or, alternatively, *all* the workers on *all* of the contractor's sites. The latter arrangement makes it possible for the contractor to take advantage of the lower premiums which are likely to be available through spreading the risk over a number of projects and therefore a larger number of employees.

Many projects consist of a parcel of work, such as a single building or other structure, or of a number of these which can be readily grouped and constructed under the one contract. In such instances, it makes good sense for the contractor to be responsible for all insurances and these are usually required to be effected by the contractor. This arrangement simplifies administration, since all insurance is then the responsibility of one party.

A major project, however, may consist of many parcels of work, such as a number of buildings or other structures, which *cannot* be readily grouped under the one contract because of either their magnitude or contractor specialisation. In such instances, each parcel of work is constructed under its own contract, and the owner may elect to be responsible for insurance both of the works and of public liability for the entire project. This arrangement makes it possible for the owner to take advantage of the lower premiums which are likely to be available through spreading the risk over a number of contracts. These premiums are also likely to be lower than a contractor could obtain for an individual contract.

MW-1 provides for two alternative insurance strategies:

- insurance by the contractor
- insurance by the owner.

These alternative strategies apply to each category of insurance *independently* and are not linked.

AS4000 also provides for two alternative insurance strategies:

- insurance by the Contractor: clause 16, 'Insurance of the Works – Alternative 1: Contractor to insure'; and clause 17, 'Public liability insurance – Alternative 1: Contractor to insure'
- insurance by the Principal: clause 16, 'Insurance of the Works – Alternative 2: Principal to insure'; and clause 17, 'Public liability insurance – Alternative 2: Principal to insure'.

These alternatives are referred to in this text as 'Alternative 1' and 'Alternative 2' respectively. As in MW-1, the alternatives apply to each category of insurance *independently* and are not linked. Where the contractor is responsible for insurances (Alternative 1), the scope of risk and the amount insured are prescribed by the owner in the contract. However, where the owner is responsible for insurances (Alternative 2), the scope of risk is *not* prescribed, and is therefore at the owner's discretion.

Whichever strategy is adopted, both MW-1 and AS4000 require the appendix to be completed accordingly, to show which alternative applies. In both instances, the owner remains responsible for insuring any separate contractors.

Insurance of the works

The works are required to be insured for the full cost of reinstatement and replacement of the whole or any part of the works which may be damaged or destroyed. The 'full cost' is precisely that since, in addition to the cost of reconstruction, it also includes the costs of demolition and removal of debris, additional design costs, and the cost of delays. As mentioned above, insurance of the works may be effected either by the owner or by the contractor.

Under MW-1, the scope of the cover and the sum insured are as set out by the owner in the contract. Insurance is maintained from the date the contractor gains possession of the site until the issue of the notice of practical completion. Whether insurance of the works is effected by the contractor or by the owner, the policy is required to name the owner, the contractor and all subcontractors as the insured. Separate contractors are *not* included and the owner may arrange for insurance against claims resulting from their activities.

Under AS4000, where insurance of the works is effected by the contractor (Alternative 1), the policy is taken out in the joint names of *only* the owner and the contractor but *also* covers all subcontractors. The scope of the cover and the sum insured are as set out by the owner in the contract, and insurance is maintained until the issue of the final certificate. Where insurance of the works is effected by the owner (Alternative 2), the policy is *not* required to be taken out in the joint names of the owner and the contractor. The scope of the cover and the sum insured are as set out by the owner in the tender documents, allowing the contractor to take out additional insurance to cover any risk excluded by the owner.

It should be noted that the only substantive difference between a party having a policy effected solely or jointly in its name, and simply being named as one of the insured, is the actual or potential responsibility for paying premiums.

MW-1: clauses E2; E4–E6; E8

From the date the contractor is given possession of the site until the issue of the notice of practical completion (see Chapter 9), the party stated in item 6, 'Contract works insurance', of schedule 1, 'Contract information'; or, if nothing is stated, the contractor, must insure against loss of or damage to:

- the works
- materials or equipment to be incorporated in the works, including items stated in schedule 8, 'Items to be supplied by the owner for incorporation in the works'
- plant, tools and equipment.

Contract works insurance must be taken out naming the contractor, its subcontractors and the owner as the insured (*clause E2*).

The owner may arrange separately for insurance of the works against damage arising from the activities of separate contractors.

The contractor's obligation to insure the works and related items for a separable part of the works ceases upon the issue of the notice of practical completion for that part (*clause E4*).

Each party must advise its insurer of the extent of the party's entitlement to an input tax credit for the GST included in the insurance premium paid. This advice must be given within 20 working days of effecting the insurance. Each party must indemnify the other for any loss due to failure to so advise the insurer. Each party must, upon request, provide the other with evidence that it has so advised the insurer (*clause E5*).

The potential loss referred to is the GST component of any payout by an insurer, since this component would not be payable to a party that was not entitled to an input tax credit under the GST Act.

Under subclause E6.1, contract works insurance must cover:

- the full reinstatement and replacement cost of the works, materials or equipment to be incorporated in the works, including items supplied by the owner, and plant, tools and equipment
- the additional fees of the architect and other consultants, being the percentage stated in item 7, 'Percentage to cover fees of the architect and other consultants', of schedule 1, 'Contract information'; or, if nothing is stated, 10 per cent of the contract price
- the costs of demolition and removal of debris, being the percentage stated in item 8, 'Percentage to cover cost of demolition and removal of debris', of schedule 1; or, if nothing is stated, 10 per cent of the contract price
- all GST associated with all the above.

The parties must not do or permit, by action or omission on their part, anything that might affect an insured party's entitlement under an insurance policy (*clause E8*).

AS4000: clause 16

The alternative stated in item 20(a), 'Insurance of the works – Alternative applying', applies; or, if nothing is stated, Alternative 1 applies (*clause 16*).

Under Alternative 1, 'Contractor to insure', before commencing the work under the Contract the Contractor must insure:

- **the work under the Contract, from the commencement of such work *until* the date of practical completion, including:**
  - **unfixed materials included in a progress certificate**
  - **materials provided by the Principal**
  - **subcontractors' materials**
- **work that is outstanding and items to be removed from the site *after* the date of practical completion until:**
  - **all such work has been completed and such items removed**
  - **all tests directed by the Superintendent have been carried out**
  - **all defective work has been made good.**

Clause 16 contains a list of permissible exclusions from cover.

The sum insured must be not less than the sum of the contract sum and the following amounts itemised in annexure part A:

- **the costs of demolition and removal of debris (item 20(b))**
- **consultants' fees (item 20(c))**
- **the value of materials to be provided by the Principal (item 20(d))**
- **the additional amount or percentage of the total of the foregoing items (item 20(e): to cover escalation costs during reinstatement).**

The insurance must be in the joint names of the Principal and the Contractor, and must cover the Principal, the Contractor and all subcontractors (referred to collectively as 'the insured'). All details of the insurance must be approved by the Principal.

The Contractor must pay all premiums and must maintain the policy until the issue of the final certificate (*clause 16*; and see Chapter 9).

Under Alternative 2, 'Principal to insure', before the date of acceptance of tender the Principal must insure the work under the Contract in the terms stated in the tender documents. The Principal must pay all premiums and must maintain the policy until the issue of the final certificate (*subclause 16*, 'Insurance of the Works – Alternative 2').

The scope and amount insured are stated so that the Contractor may exercise the option of taking out additional insurance to cover any risk excluded by the Principal. There is no requirement that the insurance be effected in joint names.

Public liability insurance

The general public is required to be insured for loss of life or limb, and for damage to property other than the works. As we saw above, public liability insurance may be effected either by the owner or by the contractor.

Under MW-1, the scope of the cover and the sum insured are as set out by the owner in the contract and insurance is maintained from the date of possession until the issue of the final certificate. Where public liability insurance is effected by either the contractor or the owner, the policy is taken out in the joint names of the owner, the contractor and all subcontractors. In both instances, the contract administrator and separate contractors are *not* included, and the owner may arrange for insurance against claims resulting from their activities.

Under AS4000, insurance is maintained until the issue of the final certificate. Where public liability insurance is effected by the contractor (Alternative 1), the policy is taken out in the joint names of *only* the owner and the contractor, but *also* covers the contract administrator and all subcontractors. The scope of the cover and the sum insured are as set out by the owner in the contract. Where public liability insurance is effected by the owner (Alternative 2), the policy is *not* required to be taken out in the joint names of the owner and the contractor. The scope of the cover and the sum insured are as set out by the owner in the tender documents. This allows the contractor to take out additional insurance to cover any risk excluded by the owner.

As with the insurance of the works, the only substantive difference between a party having a policy effected solely or jointly in its name, and simply being named as one of the insured, is the actual or potential responsibility for paying premiums.

MW-1: clauses E1; E4–E6.2; E8

From the date the contractor is given possession of the site until the issue of the final certificate, the party stated in item 5, 'Public liability insurance', of schedule 1, 'Contract information'– or, if nothing is stated, the contractor – must insure against the following risks which arise from the construction of the works and which occur on or adjacent to the site:

- **injury to or illness, disease or death of any person not covered by workers' compensation and employer's liability**
- **loss of or damage to the property of any person, excluding the works, materials or equipment to be incorporated in the works, and plant, tools and equipment.**

Public liability insurance must also be taken out naming the contractor, its subcontractors and the owner as the insured (*clause E1*).

The owner may arrange separately for insurance of the works against injury or damage arising from the activities of separate contractors.

The contractor's obligation to insure public liability for a separable part of the works ceases upon the issue of the final certificate for that part (*clause E4*).

Each party must advise its insurer of the extent of the party's entitlement to an input tax credit for the GST included in the insurance premium paid. This advice must be given within 20 working days of effecting the insurance. Each party must indemnify the other for any loss due to failure to so advise the insurer. Each party must, upon request, provide the other with evidence that it has so advised the insurer (*clause E5*).

The potential loss referred to is the GST component of any payout by an insurer, since this component would not be payable to a party that was not entitled to an input tax credit under the GST Act.

Public liability insurance must be for not less than the amount stated in item 9, 'Amount of insurance against liability for injury, illness, disease or death', of schedule 1, 'Contract information'; or, if nothing is stated, $10 000 000 (*subclause E6.2*).

The parties must not do or permit, by action or omission on their part, anything that might affect an insured party's entitlement under an insurance policy (*clause E8*).

AS4000: clause 17

The alternative stated in item 21(a) of annexure part A, applies; or, if nothing is stated, Alternative 1 applies (*clause 17*).

Under Alternative 1, 'Contractor to insure', the Contractor must take out public liability insurance before commencing the work under the Contract. The insurance must be in the joint names of the Principal and the Contractor, and must cover the Principal, the Contractor, the Superintendent and all subcontractors (all known as 'the insured'). The policy must cover the Principal's and the Contractor's liability to each other for loss of or damage to property other than the work under the Contract, including any construction plant not otherwise insured, and for death of or injury to any person not required to be insured under a workers' compensation policy.

The sum insured must be not less for any one occurrence than the amount stated in item 21(b), 'Public liability insurance – Amount per occurrence shall be not less than', of annexure part A; or, if nothing is stated, the contract sum. All details of the insurance must be approved by the Principal. The Contractor must pay all premiums

and must maintain the policy until the issue of the final certificate (*clause 17*, 'Public liability insurance – Alternative 1').

Under Alternative 2, 'Principal to insure', the Principal must take out public liability insurance in the terms stated in the tender document before the date of acceptance of tenders. The Principal must pay all premiums and must maintain the policy until the issue of the final certificate (*clause 17*, 'Public liability insurance – Alternative 2').

The scope and amount insured are stated so that the Contractor may exercise the option of taking out additional insurance to cover any risk excluded by the Principal. There is no requirement that the insurance be effected in joint names.

Insurance of employees

The contractor is required to insure its employees against claims for loss of life or limb to the extent provided by statute, as well as against claims at common law. Insurance is required to be maintained until the issue of the final certificate. The contractor is also required to ensure that all subcontractors insure their employees in the same manner.

It should be noted that some states or territories may have in force legislation that establishes a statutory authority, such as WorkCover in Victoria, which holds all responsibility for the compensation of workers for death, injury and illness caused by incidents in the workplace. In such jurisdictions, employers are no longer obliged to take out insurance, but must pay a government levy instead.

MW-1: clause E9

From the date the contractor is given possession of the site until the issue of the final certificate, either for the whole of the works or for the last separable part, the contractor must maintain workers' compensation and employer's liability insurance (alternative names for the same kind of policy in different states and territories) under the statutory scheme that is applicable to the contract (the scheme that applies in the state or territory in which the site is located). Where the applicable scheme allows an injured worker to claim damages at common law, the contractor must also insure against such claims. The contractor must ensure that all subcontractors are similarly insured (*clause E9*).

AS4000: clause 18

Before commencing the work under the Contract, the Contractor must insure against both statute and common law liability for death of or injury to its employees,. The Contractor must maintain the policy until the work under the Contract is completed (that is, until the issue of the final certificate). The insurance must, if permitted by law (of the relevant

state or territory), provide indemnity for the Principal's statutory liability to the Contractor's employees (that is, against negligence and under the relevant health and safety legislation). The Contractor must ensure that all subcontractors are similarly insured (*clause 18*).

Since it is unclear in what conceivable circumstances such indemnity would *not* be permitted by law, the conclusion may be drawn that this qualification exists just in case such circumstances should ever arise.

Cross liability

Cross liability is a feature of an insurance policy that covers the interests of two or more parties which are named in the policy as the insured, not merely those in whose joint names the policy is effected. From this, the jointly insured parties may gain the following advantages:

- all the insured parties are covered as if each was individually insured
- any of the insured parties may serve a notice of claim
- a claim by one of the insured parties becomes a claim by all of those parties
- the insurer is barred from recovering from one of the insured parties a payment to another of the insured parties.

Contrary to an all too common misconception, cross liability is *not* an insurance policy itself, but is a highly desirable feature of any insurance policy in which there are multiple insured parties. It is not a mandatory feature of all such insurance policies. However, without cross liability provisions, the insurer could seek to recover from one of the insured parties a payment to another of the insured parties – an action likely to lead to protracted litigation.

Under MW-1, the insurer is required to pay directly to the owner any amount claimed by the contractor on the owner's behalf.

MW-1: clause E3

Both public liability insurance and contract works insurances (irrespective of the party effecting the insurance, which in all cases is in joint names) must comply with the law of the state or territory in which the site is located. They must also provide (*clause E3*) that:

- the insurance covers the owner, the contractor and all subcontractors (known collectively as 'the insured')
- the policy does not cover breach of professional duty by the owner's consultants
- a claim by one of the insured becomes a claim by all of the insured
- the insurer has no rights of 'subrogation' (the substitution of one party for another for the purpose of recovering amounts paid out under a policy) against any of the insured, so long as any damage does not exceed the amount insured.

These provisions exclude separate contractors (see Chapter 5), since they are not among the insured.

AS4000: subclauses 19.3; 19.6

The party effecting insurance of the Works or public liability insurance (*subclause 19.3*) must ensure that the policies contain provisions acceptable to the other party that require that the insurer must:

- **inform both parties whenever it serves a notice on any of the insured**
- **accept a notice of claim from any of the insured as a claim by all of the insured**
- **notify the Principal and the Contractor, prior to giving notice of cancellation, whenever the party effecting the insurance fails to renew the policy or pay a premium.**

Insurance policies in joint names (that is, insurance of the Works and public liability insurance, whichever is effected by the Contractor under Alternative 1) must include a cross-liability clause (*subclause 19.6*) which provides that the insurer:

- **waives all rights of subrogation or action against any of the insured**
- **accepts that, without increasing the total amount of insurance cover, each of the insured is covered as if by a separate policy.**

Exclusions, conditions and excesses

Irrespective of the nature of the risk insured, cover under most insurance policies tends to be limited by:

- **exclusions – specific risks that are not insured**
- **conditions – specific circumstances in which otherwise insured risks are not covered**
- **excesses – monetary thresholds below which otherwise insured risks are not covered.**

Neither MW-1 nor AS4000 contains any specific provision for either the owner or the contractor to take out additional insurance to cover excluded risks. Nor is there any specific barrier to either of them doing so. Excepted risks – those risks for which the contractor cannot be held responsible – were discussed earlier.

Evidence of insurances

The party responsible for taking out an insurance policy is required to provide to the other party evidence of insurance and, from time to time, of payment of premiums. Provision of evidence of insurance is mandatory before commencement of work, and on request.

In the event of the responsible party either not taking out insurance or, at a later stage, not renewing it or not paying the premiums,

the other party may take the initiative of doing so and may charge the costs to the responsible party. If the contractor is the party at fault, the owner may refuse to make either the first progress payment (MW-1) or any payment (AS4000) which may be due to the contractor until such evidence is produced.

MW-1: clauses E7; N7

The second party may effect and maintain insurance (*subclause E7.1*) if the party required to effect either public liability insurance or contract works insurance fails any of the following:

- to satisfy the other party that the insurance has been effected by the date on which the contractor is given possession of the site
- to provide the other party, upon request, with either the insurance documentation or a written statement of the provisions of the insurance
- to satisfy the other party that the insurance is being maintained.

The second party must then, in order to recover the associated cost, submit a claim to the architect. The architect must then add that cost to or deduct it from the next certificate (*subclause E7.2*).

Where the contractor is to effect either public liability insurance or contract works insurance, the contractor must provide evidence of insurances before the owner is required to make the first progress payment (*clause N7*; and see Chapter 8).

AS4000: subclauses 19.1–19.2

The party effecting insurances must produce to the other party, before commencement of the work under the Contract and on request, evidence of insurance (*subclause 19.1*).

If a party effecting insurances fails to provide to the other party on request evidence of insurance, then the other party may effect such insurance. The Superintendent must certify the cost of these measures, which will then become a debt due from the defaulting party to the other party. If it is the Contractor which fails to provide evidence of insurance then the Principal (as a prelude to itself effecting the insurance) may initially refuse to make any payment to the Contractor until it provides such evidence (*subclause 19.2*).

Insurance claims

Any of the insured is entitled to submit a claim under an insurance policy that covers its interests. In the event of any incident that may result in a claim under a policy covering either insurance of the works or public liability insurance, each party is required to inform either the contract administrator (MW-1) or the other party (AS4000) of the incident, and to keep it informed of further developments.

Under MW-1, the contractor may submit an additional progress claim for losses incurred in an incident for which an insurance claim is made. Excesses apply to such claims, and the party submitting the claim may recover a proportion of the excess from the other party.

Under AS4000, when a claim is settled by the insurer under an insurance of the works policy, the contractor must make good any damage and submit a claim for the cost of making good. This should then be assessed and certified by the contract administrator and paid by the owner in the normal manner. This claim should also include the value of the damaged work, *if* this has not been included in a previous progress claim.

MW-1: clauses E10–E12

When either party makes a claim for loss or damage (*clause E10*), it must:

- **make the claim promptly**
- **provide all information required under the insurance policy**
- **notify the architect promptly of the claim upon becoming aware of the event that gave rise to the claim**
- **include details of the claim in the notice**
- **promptly give the architect, upon request, any further information regarding the claim.**

The excesses payable (per claim) under public liability insurance and contract works insurance are stated in item 10, 'Insurance excess', of schedule 1, 'Contract information'; or, if nothing is stated, $1000 in both instances. The party making the claim may recover the excess from the other party in proportion to the responsibility for the loss of the other party and those responsible to it (*clause E11*).

If loss or damage occurs to the works and materials or equipment to be incorporated in the works or used on the site, the contractor may submit an additional progress claim to the architect (see Chapter 8) for the value of these at the time of the loss or damage (*clause E12*). In other words, the contractor need not wait until the date for submitting routine progress claims.

AS4000: subclauses 19.4–19.5

Each party must notify the other of any incident likely to give rise to a claim under insurance of the Works and public liability insurance policies. The first party must keep the other party informed as to the progress of the claim. The Contractor must ensure that subcontractors similarly notify the parties of any such incident (*subclause 19.4*).

Where a claim under an insurance of the Works policy has been settled, the procedure is as follows. Firstly, if the Contractor *has* received payment for any part of the original work, but *has not* completed the reinstatement of that work then, if either party so requests, the moneys received must be paid into a bank account in the joint names of the Principal and the Contractor. The Superintendent must then progressively certify payment against the joint account as the Contractor proceeds with the reinstatement. Otherwise, if the Contractor *has not* received payment for any part of the original work, the Principal must immediately pay to the Contractor the moneys received for the damage to that work (*subclause 19.5*).

From this point onward, payment for reinstatement is treated as in the previous case, where the Contractor *has* received payment for the original work. Presumably, although this is nowhere stated, if the Contractor *has* received payment for any part of the original work, and *has* completed the reinstatement of that work, then the Contractor should include the reinstatement in the next routine progress claim.

SECURITY

A party provides security under a contract as a financial pledge that it will perform its obligations under that contract. If the party defaults, it loses the amount pledged. The objective of requiring security is to create a potential source of compensation for the other party if the first party fails to perform these obligations.

Provision of security

The contractor is required to provide security for performing the key obligations of completing the work as designed and of doing so within the time stated. AS4000 *may* also require the owner to provide security for the key obligations of providing the contractor with access to the site, information and instructions, and of making payments to the contractor when required to do so.

The amount of security to be provided by the contractor is shown in the contract's appendix, either as a lump sum or as a percentage of the contract sum. It should be noted that, if the contract sum is increased over time by means of numerous variations, then the relative amount of security provided as a *lump sum* remains constant and therefore reduces progressively as a percentage of the contract sum. On the other hand, if the owner retains a *percentage* of the contract sum, then the absolute amount of security increases over time in the same proportion as the contract sum.

MW-1: clauses C1; C3; N7

The contractor must provide security for the due performance of its obligations under the contract. Security may be either by cash retention or by unconditional guarantee (*subclause C1.1*).

The type of security to be provided under the contract is stated in item 1, 'Type of security', of schedule 1; or, if nothing is stated, is cash retention (*subclause C1.2*).

Where the works are divided into separable parts, separate security in accordance with this clause must be provided for each part (*subclause C3.3*).

The contractor must provide any security that is required to be by unconditional guarantee before the owner is required to make the first progress payment (*clause N7*; and see Chapter 8).

AS4000: clause 4; subclauses 5.1 and 5.6

As we saw in Chapter 1, where the Works are divided into separable portions, the Superintendent must identify the respective amount of security for each separable portion (*clause 4*).Thus the Contractor must provide security individually for each separable portion of the Works.

The Contractor and the Principal must provide security in the form stated in item 13(a), 'Contractor's security – Form', and in item 14(a), 'Principal's security – Form', respectively of annexure part A. The Contractor must provide security at the time stated in item 13(d), 'Contractor's security – Time for provision (except for retention moneys)'; or, if nothing is stated, within 28 days after the date of acceptance of tender. The Principal must provide security at the time stated in item 14(c), 'Contractor's security – Time for provision'; or, if nothing is stated, within 28 days after the date of acceptance of tender. All security other than cash or retention must be transferred in 'escrow' (*subclause 5.1*) – that is, held on behalf of the parties by a trustworthy third party which is not related to either party to the contract. Note however that, in practice, the Principal usually holds the unconditional guarantees, but is only entitled to convert them into cash if the conditions for doing so, which are set out in the Contract, eventuate.

If the tender documents included a 'deed of guarantee, undertaking and substitution', and if either party is a related or subsidiary corporation – of another company – then the other party may ask the first party to lodge such a deed with the other party within 14 days. The deed must be duly executed – by both the first party and the related or parent company, as a guarantee for the performance of the obligations of the first party – and be enforceable (*subclause 5.6*).

Form of security

Security may be either cash or performance guarantees provided by a bank or insurance company.

Security may be provided by the contractor either as up-front guarantees, or as retention by the owner, up to a predetermined maximum, of a predetermined percentage of all payments due to the contractor. AS4000 permits other unspecified forms of security, and requires the owner's security to be by guarantees.

Guarantees are generally held by the party to which they are provided. Retention moneys are progressively deducted from progress payments and deposited in a designated trust account in a bank.

Interest on moneys retained by the owner belongs to the contractor, and is paid in two instalments: after practical completion, and after the issue of the final certificate. However, AS4000 also permits a public sector owner to retain the interest earned on retention moneys.

MW-1: clauses C2–C4

Where security provided by the contractor is to be by cash retention, the owner may progressively retain up to 10 per cent of the value of all progress payments, to a maximum of the percentage stated in item 2, 'Percentage of contract price, as adjusted, for cash retention', of schedule 1, 'Contract information'; or, if nothing is stated, 5 per cent of the contract price (*subclause C2.1*).

The owner must pay the cash retention into a separate, designated trust account in a bank, and must hold the retention plus any interest it earns, less any bank charges, as trustee for the contractor (*subclause C2.2*).

Where security provided by the contractor is to be by unconditional guarantees, the contractor must give the owner two equal unconditional guarantees to a total value equal to the percentage of the contract price stated in item 3, 'Percentage of contract price for each unconditional guarantee', of schedule 1, 'Contract information'; or, if nothing is stated, 2.5 per cent each of the contract price (*subclause C3.1*).

An unconditional guarantee must be both from a financial institution and in a form approved by the owner, such as that shown in schedule 5, 'Form of unconditional guarantee' (*subclause C3.2*).

As we saw earlier, where the works are divided into separable parts, separate security in accordance with clause C3 must be provided for each part (*subclause C3.3*).

Where the owner has not stated the type of security in item 1, 'Type of security', of schedule 1, 'Contract information', and the works have not been divided into separable parts, the contractor may change the type of security at any time until practical completion by notifying the architect (*subclause C4.1*).

If the contractor notifies the architect of the change when submitting a progress payment, the architect must take the change into account when preparing the next progress certificate (*subclause C4.2*).

To change from cash retention to guarantees, the contractor must give the owner the unconditional guarantees together with the (next) certificate and the accompanying tax invoice. The owner must then close the trust account, and pay the contractor the amount of cash retention it holds, within the period stated in item 4, 'Period of payment of certificates, or release of security', of schedule 1, 'Contract information'; or, if nothing is stated, seven calendar days. The owner must also provide the contractor with a copy of the closing bank statement for the trust account (*subclause C4.3*).

This procedure restores the situation as it would have been at the beginning of the project had unconditional guarantees been selected.

To change from unconditional guarantees to cash retention, the contractor must give the owner cash to the value of the guarantees held by the owner. The owner must then pay the cash into a separate, designated trust account in a bank, and must hold the retention plus any interest it earns, less any bank charges, as trustee for the contractor. At the same time, the owner must give the contractor the guarantees when paying the next certificate (*subclause C4.4*).

This procedure, by contrast, does *not* restore the situation as it would have been at the beginning of the project had cash retention been selected. Instead, it creates a new situation as it would have been had the contractor paid the full amount of retention at the beginning of the project. It would be highly disadvantageous to the contractor to make this change before the works were 50 per cent complete, as it would involve buying back the guarantees for their *full* value at a time when only a *fraction* of the potential retention had been withheld by the owner. The only conceivable circumstance in which such action might be envisaged would be if the guarantor were for any reason to withdraw the guarantees.

Failure by either party to comply with the above procedures does not affect the other party's obligation to prepare a tax invoice for presentation with a certificate, or to pay a certified amount within the prescribed time. Nor does such failure by the owner oblige the owner to make the first progress payment before the contractor provides the changed security (*subclause C4.5*).

AS4000: subclauses 5.1; 5.3; 5.5

Under clause 5, the Contractor must provide security in the amount stated in item 13(b), 'Contractor's security – Amount or maximum percentage of contract sum', of annexure part A; or, if nothing is stated, 5 per cent of the contract sum.

If security is to be by retention moneys, the percentage to be retained of each progress certificate must be as stated in item 13(c), 'Contractor's security – If retention moneys, percentage of each progress certificate'; or, if nothing is stated, 10 per cent until the limit in item 13(b).

The Principal must provide security in the amount stated in item 14(b), 'Principal's security – Amount or maximum percentage of contract sum', of annexure part A; or, if nothing is stated, none is to be provided (*subclause 5.1*).

A party providing security by cash or retention moneys may change the type of security at any time. If a form of security other than cash or retention moneys is substituted, the other party must cease deducting retention moneys and promptly return to the first party all cash or retention moneys held by it (*subclause 5.3*).

Security provided by way of cash or retention moneys, and all interest earned on it, must be held in trust for the party providing it until that party is entitled to receive it. However, where the party holding the cash or retention moneys is a government department or agency, or a municipal, public or statutory authority, the security need not be held in trust. In such an instance, all interest earned belongs to the party holding the security (*subclause 5.5*).

Thus it is more expensive for a contractor to provide this form of security to a public than to a private owner, since the contractor does not receive interest on this part of its cash funds. This tends to increase tenders and hence the contract sum, however marginally.

Access to security

Security is required from the commencement of work until the issue of the final certificate: in other words, for the duration of the contract, and whether the contract is completed normally or terminated abnormally. If either the owner or the contractor defaults, the other party may claim the security in compensation for any loss caused.

In the normal course of events, security is returned to the providing party partly at practical completion and partly at final certificate. (Release of security at these stages is dealt with in Chapter 9.)

MW-1: clauses C5 and C6

The owner may 'draw on' (that is, claim) the security provided by the contractor if the contractor fails to pay within the period for payment stated in item 4, 'Period for payment of certificates, or release of security', of schedule 1 (or, if nothing is stated, seven calendar days) the amount certified by the architect as payable to the owner in:

- a progress certificate
- the final certificate; or
- the certificate issued in lieu of a final certificate upon termination of the contractor's engagement for default or insolvency.

The owner may also claim the security if it terminates the contractor's engagement on the grounds of its default or insolvency, and the architect issues a certificate in lieu of a final certificate. In both cases the owner may not proceed if the contractor gives the architect a 'notice of dispute' relating to the certificate or termination (*clause C5*).

Note that there appears to be an error in the contract, in that it both *requires* and *does not require* notice in the event of termination. Presumably, since termination is treated separately both above and in subclause 6.1 below, notice is *not* required.

The owner must notify the contractor and the architect of its grounds for claiming any part of the security provided by the contractor, and of the amount of security to which the owner is entitled. Notification is not required if the architect has issued a certificate in lieu of a final certificate upon termination of the contractor's engagement for default or insolvency (*subclause C6.1*).

In these circumstances, the contractor forfeits the full amount of the security.

If the security is cash retention, the owner may then withdraw from the bank account the amount to which it is entitled (*subclause C6.2*).

If the security is in unconditional guarantees, the owner must demand in writing payment from the financial institution which provided the guarantees (*subclause C6.3*).

AS4000: subclause 5.2

Either party may notify the other – in the event of non-payment of a certified amount – that it intends to 'have recourse to' (that is, take possession of) the security. If the amount is not paid after five days of this notice, then the first party may take possession of the security (*subclause 5.2*).

REVIEW

A major concern of the parties to a building and construction contract is risk and how to avoid it. The fairest and most effective way of distributing the risk is to allocate it, wherever possible, to the party that has effective control of the risk in question.

Thus, the contractor is required to accept liability for the financial consequences of all aspects of the construction process over which it has effective control. Hand in hand with this liability goes the responsibility of the contractor to indemnify, or protect, the owner

from the financial consequences of any event for which the contractor has accepted liability.

However, acceptance by a party of liability for the consequences of an event, and agreement by that party to indemnify the other party against those consequences, is really no more than an allocation of risk. It does not and cannot guarantee that the indemnity provided will be worth more than the paper on which it is written. Consequently, it is also necessary to insure against all major envisaged risks to the project.

The three mandatory areas of insurance which are considered to cover these risks to the project are:

1 damage to the works
2 liability to the public for death, injury and damage to property
3 death and injury of employees.

The contractor is required, broadly speaking, to indemnify the owner against claims under the first two of these areas. Claims under the last area are a matter exclusively for the contractor.

At the owner's option, contract works insurance and public liability insurance may be taken out either by the owner or by the contractor. Insurance of employees is invariably taken out by the contractor.

Contract works and public liability insurances are required to cover the interests of the owner, the contractor, the subcontractors and, in some instances, the contract administrator, as 'the insured'. Cross liability is a required feature of insurances with multiple insured parties.

Both owners and contractors are fallible, and liable to default in fulfilling their responsibilities. As a safeguard, contractors are generally required to provide security for the performance of their obligation to complete the project in accordance with the contract. Owners are sometimes required to provide security for the performance of their obligation to provide access and information, and to pay the contractor in accordance with the contract.

Security is deposited by the owner or by the contractor with a third party before commencement of the work in the form of cash, bonds or guarantees. Retention moneys, if provided by the contractor, are deducted by the owner from payments due to the contractor.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- section C, 'Security' (clauses C1 to C6)
- section D, 'Liability' (whole section)
- section E, 'Insurance' (whole section)
- section N, 'Payment for the works' (clause N7).

AS4000 - 1997 *General conditions of contract*:

- clause 4, 'Separable portions' (whole clause)
- clause 5, 'Security' (subclauses 5.1 to 5.3, 5.5 and 5.6)
- clause 12, 'Protection of people and property' (whole clause)
- clause 14, 'Care of the work and reinstatement of damage' (whole clause)
- clause 15, 'Damage to persons and property other than WUC' (whole clause)
- clause 16, 'Insurance of the Works' (whole clause)
- clause 17, 'Public liability insurance' (whole clause)
- clause 18, 'Insurance of employees' (whole clause)
- clause 19, 'Inspection and provisions of insurance policies' (whole clause)

Aqua Group, Hackett, M and Robinson, R (2003), *Pre-Contract Practice and Contract Administration for the Building Team*, Blackwell Science, Oxford:

- chapter 3, 'Procedure from brief to tender'
- chapter 12, 'Placing the contract'.

Ramus, J and Birchall, S (1996), *Contract Practice for Surveyors*, 3rd edn, Laxton's (Butterworth-Heinemann), Oxford:

- chapter 2, 'Building procurement: Traditional methods'
- chapter 3, 'Building procurement: Alternative methods'.

REVIEW QUESTIONS

2.1 Briefly explain the nature of liability and indemnity as they relate to both parties to the contract. Explain also the reasons for taking out insurance, and the types of risk which are usually insured.

2.2 What are the reasons for the alternative insurance strategies available under the contracts studied and for the exclusion of insurance of employees from the alternatives? Explain the practical implications of these strategies.

2.3 In what circumstances would cross liability apply? What are its advantages, and any other practical consequences under the contracts studied?

2.4 Describe the procedures under the contracts studied for the provision of evidence of insurance. Explain also the sanctions available in the event of failure to provide such evidence.

2.5 Explain the provisions of the contracts studied for prior notification of potential claims. Explain also the procedure for paying the contractor for the original value of damaged work, as well as for the cost of reinstatement when a claim is settled.

2.6 What is the purpose of providing security under the contracts studied, the forms in which it may be provided, and the circumstances in which it may be paid out?

2.7 Explain the distinguishing features of insurance of the works under the contracts studied when the insurance is effected by:

(a) the owner
(b) the contractor.

2.8 Describe the distinguishing features of public liability insurance under the contracts studied when the insurance is effected by:

(a) the owner
(b) the contractor.

PART 2

ADMINISTRATION AND DISPUTES

CHAPTER 3

ADMINISTRATION OF THE CONTRACT

OVERVIEW

Ideally, once an owner and a contractor have entered into a contract for a construction project, it should be possible for the contractor to proceed with the construction until it is completed, pausing only to send the owner periodic progress claims.

Likewise, it should be possible for the owner to sit back and forget about the project until it was completed, apart from sending the contractor periodic progress payments – and occasionally visiting the site, either out of curiosity or to show it off to friends and associates. After all, are not both the owner and the contractor reputable individuals who have entered into the contract in good faith and now have shared project objectives? Well, yes and no.

The building and construction contract, like our adversarial legal system in which it has its foundations, correctly assumes that individuals who are associated in a business enterprise may well have different and often conflicting objectives. Even when they have shared objectives, they will probably have different and conflicting interests.

So how can the owner and the contractor safeguard their respective interests during the contract? How can the owner be certain that the contractor is meeting the project objectives? How can the contractor protect the carefully planned work program from the interference of a naive but enthusiastic owner? In most instances, the owner has neither sufficient expertise nor time to ensure that the work will be constructed as designed, of the required quality, completed on time and within the budget. In any case, it would be an unequal contest in most instances, since there are many experienced builders but very few experienced owners!

The solution to this dilemma is found in the contract administrator, an experienced professional consultant person or firm, which is engaged by the owner to supervise the work. The contract administrator's role is to ensure that the project objectives are met, while at the same time dealing fairly between the owner and the contractor.

This chapter deals with:

- the role of the contract administrator
- the way in which a building and construction contract is administered by the contract administrator
- the conduct and monitoring of the work
- the adjustment for all eventualities of the amount payable to the contractor
- the formal communications between owner, contract administrator and contractor.

It presents the reader with a comprehensive view of the nature of the authority under which a building or construction contract is administered, and provides some answers to the following frequently asked questions:

- What is the status of the contract administrator with respect to the owner and the contractor? What happens if the contract administrator resigns or is dismissed?
- What are the two principal roles of the contract administrator? What is it authorised to do in each of these roles?
- What is the status of the contract administrator's instructions to the contractor? What recourse does it have if the contractor fails to comply with an instruction?
- What are the respective functions of a contract administrator's representative and a contractor's representative? By whom and how are they appointed?
- What is the scope of the works? What are the respective obligations of the owner and the contractor in regard to setting out the works?
- What are the contractor's obligations in regard to provision of labour and materials, choice of construction methods, superintendence and compliance with the requirements of relevant authorities?
- What are the contractor's obligations in regard to standard of work? What recourse does the contract administrator have if the contractor fails to comply with the standard?

ADMINISTRATION

Just like any other contract, a building and construction contract needs to be regularly and competently administered throughout its life. As we saw in Chapter 1, standard building and construction contracts make clear provision for the administration of the contract.

Some contracts, such as the ABIC series, stipulate that an architect is to administer the contract and require the 'Architect' to be named

in the 'Introduction'. Others, such as ABP-1, stipulate that the 'Proprietor' is to administer the contract. Others again, notably AS4000, have no provision for dealing with either the contract administrator's professional background or its actual function, but require the 'Superintendent' to be named in the annexure.

The contract administrator

The contract administrator is an expert and experienced person or firm appointed by the owner to administer the work of the project on the owner's behalf. If the owner is a large company which is involved in an extensive and continuous building and construction program, the contract administrator may well be a salaried employee of the owner. While the contract administrator, irrespective of its relationship to the owner, is not a party to the contract, it plays a key role as the owner's agent in the process of bringing the project to completion. So critical is this role that the owner is required to ensure that there is a contract administrator throughout the life of the contract.

The role of the contract administrator is two-fold, representing the owner's interests as agent, while also exercising an independent function in matters that require the exercise of professional judgement. In the first role – as the owner's agent – the contract administrator looks after all aspects of the project on behalf of the owner, including all direct contact and communication with the contractor. In this role, the contract administrator issues instructions to the contractor as to the scope, quality, time and cost of the work, and all other relevant matters under the contract.

In the second role – as independent assessor, valuer and certifier – the contract administrator periodically assesses the quantity and quality of work done, values the work done, and issues certificates for payment by the owner to the contractor. In this role, the contract administrator acts in a 'quasi-judicial' capacity: one which requires the exercise of professional independence and integrity.

MW-1 defines the contract administrator's authority in terms of a dual role, similar to that described above, although stated in much less detail. AS4000 does not define this at all, leaving it to be inferred from the content of the contract. Other statements in AS4000 indicate that it roughly approximates the contract administrator's authority under MW-1.

Insofar as the second role is concerned, the owner is required to ensure that the contract administrator acts fairly and impartially (MW-1); or reasonably and in good faith (AS4000). MW-1 also prohibits the owner from influencing the contract administrator's exercise of this role in favour of the owner. The origin of this

requirement may well lie in the once common situation in which the owner is a government body or a large corporation and the contract administrator is one of its own employees. It is somewhat difficult to envisage the owner even attempting to exercise this degree of control over the professional behaviour of an external consultant.

As we will see later in this chapter under 'Contract administrator's representatives', the contract administrator may delegate some of its work in either aspect of this dual role to a representative or another appropriate consultant such as an architect, an engineer or a quantity surveyor. However, irrespective of the degree of *delegation*, the contract administrator retains *responsibility* for all decisions taken, instructions given and rulings made in either aspect of the role.

MW-1: subclause A4.2; clause A6

As we saw in Chapter 1, the owner must appoint an architect to design, document and administer the works (*subclause A4.2*). It is in the third of these that the architect acts as the contract administrator.

The architect is identified in item 2, 'The architect', of the 'Introduction' (*subclause A6.1*).

The architect administers the contract on behalf of the owner, and is the owner's agent for the purpose of directing the contractor. However, when acting in the role of assessor, valuer and certifier, the architect must act independently and *not* as the owner's agent (*subclause A6.2*).

The owner must ensure that the architect complies with the contract and acts fairly and impartially in the role of assessor, valuer and certifier as between the owner and the contractor. The owner must not compromise the architect's independence in the exercise of this role (*subclause A6.3*) – that is, attempt to influence the architect to favour the owner.

The owner authorises the architect to administer the contract (*subclause A6.4*). If the architect resigns, becomes incapable of acting as architect, or is dismissed by the owner, the owner must immediately nominate a replacement and notify the contractor (*subclause A6.5*). If the contractor has no reasonable objection to the nominee, that person is appointed as the architect (*subclause A6.6*).

The replacement architect is bound by all written decisions of *any* previous architect (*subclause A6.7*) – thus allowing for the unlikely eventuality of a series of two or more previous architects.

AS4000: clause 20

The Principal must ensure that there is a Superintendent at all times. The Principal must also ensure that the Superintendent performs all of its duties under the contract, and acts reasonably and in good faith (*clause 20*).

There is no explicit provision for replacing the Superintendent. However, since there must be a Superintendent at all times, the responsibility to replace may be inferred.

The contract administrator's instructions

The contract administrator's instructions to the contractor must be in writing. However, AS4000 allows the initial instruction to be given orally, and then confirmed in writing; while some specified instructions must be given in writing in the first instance. MW-1 allows only urgent instructions to be given orally and then confirmed in writing. Consequently, the distinction between oral and written instructions has been largely, and deliberately, ignored throughout this text. All 'notices' given by either party are, naturally, required to be in writing, and the verb 'notify' is used in the text to mean 'give a notice'.

Any instruction or notice to the contractor should quote the provision of the contract under which it is given, and should name any other pertinent document. While neither MW-1 nor AS4000 specifically requires the contract administrator to quote the relevant clause of the contract that gives authority for the instruction, doing so will certainly head off any argument about the contract administrator's authority for giving the instruction. The instruction or notice should also specify the time frame within which the instruction is to be performed or a response is to be given, irrespective of whether the time frame is one that is prescribed by the provision of the contract being quoted or is being set by the contract administrator as a reasonable time for this particular activity.

Neither MW-1 nor AS4000 has any specific provision for dealing with the outcome of the contractor's failure to comply with an instruction – presumably because such failure in any case constitutes a breach of the contract and may be dealt with as such.

Example 3.1 is a model contract administrator's instruction to the contractor, which fulfils all contractual requirements for such an instruction for any purpose. The wording is in a basic form that would suit only the least complex of circumstances, in which a single sentence can encompass all the ramifications of the instruction.

MW-1: clause A7

The architect's instructions to the contractor must be in writing and may be given at any time during the contract (*subclause A7.1*).

The architect may give the contractor an 'urgent instruction' (*subclause A7.2*) if:

- the circumstances are urgent
- the contractor requests an urgent instruction (the contractor may first make the request orally, and must confirm it in writing within 24 hours); or
- the architect is ratifying the contractor's urgent action, taken to protect the works.

EXAMPLE 3.1
CONTRACT ADMINISTRATOR'S INSTRUCTION

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144
[date]

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to clause [*clause number and heading*] of the Contract, you are hereby instructed/directed to [*description of the required action*] in accordance with [*number and title of an attached drawing or sketch or other document if relevant*] within [*number of days if relevant*] days.

Yours faithfully

Bossie, Boots Pty Ltd
(The Architect/Superintendent)
att [*if relevant*]

Copy to: The owner/Principal [*if required*]

The architect may first give an urgent instruction orally, and must then confirm it in writing within 24 hours (*subclause A7.3*).

An urgent instruction, unless it states otherwise, has the same effect as any other instruction (*subclause A7.4*).

AS4000: clause 20

The Superintendent may give directions to the Contractor orally, and then confirm them in writing as soon as practicable, except where the Contract stipulates that a direction must be given in writing. The Contractor may request in writing that the Superintendent confirm an oral direction in writing. In such an instance, the Contractor need not comply with the direction until the Superintendent does so (*clause 20*).

The contract administrator's representatives

As we saw earlier, the contract administrator is an expert and experienced person or firm appointed by the owner to administer the work of the project on the owner's behalf. In many instances, the contract administrator may be acting in this role concurrently in a number of contracts. Given the responsibilities conferred by the appointment and the concomitant demands on the contract administrator's time, there logically needs to be an individual person who either is the contract administrator or has the authority to act on the contract administrator's behalf in regard to each contract. An especially large and complex project may require that person to have one or more assistants or representatives.

MW-1 provides for the appointment of one only such representative at the very outset, by nominating this person in the contract alongside the nomination of the architect. The intention here, clearly, is that the representative is to exercise *all* of the architect's functions in relation to the contract. In many instances, the representative, for all intents and purposes (although not contractually), will be the architect.

AS4000 allows the Superintendent to appoint any number of representatives at any time during the contract. These representatives are required to be formally appointed, and each formally delegated *specific* functions.

The owner or the contract administrator may also appoint a 'clerk of works' – an employee who is the eyes and ears of the contract administrator at the site, but who has no contractual status.

MW-1: item 2

The architect's representative is identified in item 2, 'The architect', of the 'Introduction'. The implication here is that the representative, if one is so identified, is an individual employee of the individual or firm identified earlier in item 2 as 'the architect'.

AS4000: clause 21

The Superintendent may appoint any number of individuals, to whom any of the Superintendent's functions may be delegated. No function may be delegated to more than one representative at a time, but the Superintendent may continue to exercise a delegated function (*clause 21*). This means that instructions given by the representative to the contractor have the same status as if given by the Superintendent.

The Superintendent must immediately notify the Contractor of:

- **the appointment and identity of a representative, and the function delegated**
- **the termination of such an appointment.**

No appointment may be made if the Contractor reasonably objects (*clause 21*).

The contractor's representative

Just as the owner is required to ensure that there is a contract administrator throughout the life of the contract, so the contractor is required to ensure that there is a competent person to supervise the work (AS4000), and to receive instructions from and give information to the contract administrator (MW-1). The contract administrator's instructions to the contractor's representative are deemed to have been given to the contractor.

MW-1: clause G3

The contractor's representative is identified in item 1, 'Execution of the contract', of the 'Introduction'. (The implication here is that a representative is an individual employee of the individual or firm identified earlier in item 1 as 'the contractor'.) This person's principal function is to receive instructions from and give information to the architect. The contractor may change its representative by a notice to the architect (*subclause G3.1*).

There must be a contractor's representative at all times (*subclause G3.2*).

AS4000: clause 22

The Contractor must personally supervise the work under the Contract, or appoint a competent representative to do so. Any direction given by the Superintendent to the Contractor's representative is deemed to have been given to the Contractor, and any matter known by the representative is deemed to be known by the Contractor. The Contractor must immediately notify the Superintendent of the appointment and identity of the representative, and of any changes in the appointment. No appointment may be made if the Superintendent reasonably objects (*clause 22*).

THE WORKS

As we saw in Chapter 1, 'the works' are defined as the work to be executed under the contract. AS4000 specifically, and probably redundantly, includes variations in its definition. AS4000 qualifies this further with the rider that the works include only such work as is to be handed over to the owner, thus excluding any temporary works. MW-1 makes no reference to temporary works. AS4000 also introduces the concept of 'work under the Contract', which comprises both the works and temporary works. The term 'the necessary work',

while used throughout MW-1, is nowhere defined but may be taken to be identical to 'the work under the Contract' in AS4000.

Temporary works include major structures such as shoring, coffer dams and sheet piling, without which the works could not be constructed but which must be removed on completion of the works. Temporary works can also be construed to include other, more common structures such as planking and strutting to sides of excavations, scaffolding, formwork to sides and soffits of concrete, and centres or supports to brick arches.

Commencement of work on the site

Time, or the duration of the construction phase of a contract, is one of the key project parameters. In recognition of this, as we saw in Chapter 1, the date by which the owner must give the contractor possession of the site (MW-1), or the date of acceptance of tender (from which the date by which the owner must give the contractor possession of the site is calculated: AS4000), is stated in the appendix to the contract.

AS4000 also allows the owner to give possession of enough of the site at any one time for the contractor first to commence and then to continue work.

MW-1: clause A2

As we saw in Chapter 1, the contractor must commence the works within ten working days after being given possession of the site (*clause A2*).

AS4000: subclause 24.1

The Principal must give the Contractor possession of enough of the site to commence work under the Contract within the time stated in item 22, 'Time for giving possession', of annexure part A; or, if nothing is stated, within 14 days of the date of acceptance of tender. (While this does not specify the time within which the contractor *must* commence the works, it does specify the date before which it *may not* do so.) The Principal must then continue to give the Contractor possession of the remainder of the site as and when necessary for the execution of the work (*subclause 24.1*).

Working hours and working days

Time is an inflexible resource. It passes irrespective of the use to which it is, or is not, put. If you don't use it, you lose it! However, the allocation of resources during a given period of time, such as a day, a week or indeed the entire time allocated to construction, is flexible. So it is important for the contractor to know the days on

which work may be done at the site, the number of hours per day that may be worked, and the time of day during which those hours may be worked.

MW-1 ignores working hours, but establishes working days as Monday to Friday, as worked in the building and construction industry in the relevant state or territory of Australia. Thus any extension of working days required by either party (to, say, six days per week) would need to be included in the contract as a special condition.

AS4000 imposes no constraints on the contractor's use of the available time, but allows the contractor to establish both working hours and working days. Thus any restrictive provision governing working hours or working days required by the owner would need to be included in the contract as a special condition.

MW-1: section S

As we saw in Chapter 1, working days are Monday to Friday, excluding statutory or public holidays and rostered days off and any industry shut-down periods applicable to the state or territory in which the site is located (*section S*). Note that working hours on those days are not prescribed.

AS4000: clause 31

Working hours and working days are as stated in the Contract or as notified by the Contractor before commencing work at the site and must not be varied without the Superintendent's prior approval. If it becomes necessary to vary the hours and days worked for reasons of safety, the Contractor must notify the Superintendent as soon as possible (*clause 31*).

Access to the site

As we saw in Chapter 1, the contractor must allow the owner, the contract administrator, separate contractors and consultants reasonable access to the site. MW-1 also includes the owner's lender among these persons.

MW-1: clause F2

The contractor must give the owner, the architect, separate contractors, consultants and the owner's lender reasonable access to the site, and to other locations where work is taking place (*clause F2*).

AS4000: subclause 24.2

The Contractor must give the Principal and the Principal's employees, consultants and agents reasonable access to the site after receiving reasonable notice. The Contractor must give the Superintendent reasonable access to the work under the Contract at all times (*subclause 24.2*).

Cleaning up

The contractor is required to keep the site clean and tidy at all times.

An untidy site is a dangerous site. Accidents occur because of rubbish left either in the way of workers' access, or where it may be dislodged and fall to a lower work level. Physical injuries caused by such accidents are distressing for those involved, and are costly to the contractor, as is any material damage to plant and the like.

AS4000 requires the contractor to remove rubbish regularly; if it fails to do so the contract administrator may employ others to do so and charge the cost to the contractor. MW-1 has no provision for dealing with the issue of non-compliance, so that any such provision required by the contract administrator would need to be included in the contract as a special condition.

MW-1: clause F2

The contractor must keep the site clean and tidy at all times (*clause F2*).

AS4000: clause 27

The Contractor must keep the site and the work under the Contract clean and tidy, and must regularly remove rubbish and surplus material. It must also remove all temporary works and construction plant within 14 days after practical completion, unless the Superintendent extends that time. If the Contractor fails to remove any of the above, then the Superintendent may, after five days notice of its intention to do so, have the work carried out by others. The Superintendent must certify the cost of these measures, which will then become a debt due from the Contractor to the Principal. This applies even in the event of default or insolvency by either party (*clause 27*; and see Chapter 4).

Urgent protection

Building and construction is a relatively dangerous industry in terms of the number of accidents that occur and the resulting injuries and deaths. When the safety of the works is threatened by, for example, the side of an excavation starting to slip or an adjacent wall developing cracks, urgent action must be taken to prevent an impending collapse.

AS4000 takes this issue so seriously that it actually assumes that the contractor will spontaneously take the necessary action, and provides for the contract administrator to take such action *only* in the event of the contractor failing to do so. MW-1 only requires the contractor to respond to an urgent instruction from the contract administrator to take any action (although, as mentioned above, such instructions may be given to ratify urgent action already taken).

MW-1: subclause A7.2 and clauses J9–11

As we saw above, the architect may give the contractor an urgent instruction if the circumstances are urgent; or the contractor requests an urgent instruction; or the architect is ratifying the contractor's urgent action, taken to protect the works (*subclause A7.2*).

The architect may give the contractor an urgent instruction for a variation to the works (see Chapter 6) at any time up to the date of practical completion (*subclause J9.1*). The instruction must state that it is an 'urgent instruction' and that it is given under this clause (*subclause J9.2*).

The contractor must immediately comply with an urgent instruction (*clause J10*).

The contractor may make a claim to adjust the contract for the value of the work in complying with an urgent instruction. This claim is treated as a variation to the works (*subclause J11.1*). The claim must be submitted and processed in accordance with section H of the contract (*subclause J11.2*; and see below under 'Contract sum adjustments').

AS4000: clause 13

If the Contractor fails to take urgent action which is necessary for reasons of safety, the Superintendent may take the action. If time permits, the Superintendent must give the contractor notice of its intention to take this action. If the action should have been taken by the Contractor at its own cost, then the Superintendent must certify the cost of these measures, which will then become a debt due from the Contractor to the Principal (*clause 13*).

Control of the contractor's employees and subcontractors

In the interest of safety, efficiency and site morale, AS4000 authorises the contract administrator to order the contractor to dismiss any person or subcontractor employed on the works, or in connection with the works, who the contract administrator considers is incompetent, negligent or guilty of misconduct. MW-1 has no provision for dealing with this issue, so that any such provision required by the contract administrator would need to be included in the contract as a special condition.

AS4000: clause 23

The Superintendent may direct the Contractor to have removed from the site or any activity of the work under the Contract any person (or any subcontractor) who the Superintendent considers is incompetent, negligent or guilty of misconduct (*clause 23*).

Discoveries on the site

The contractor is required to notify the contract administrator of the existence of any 'latent condition' – this being a difference between the information disclosed regarding the site and soil conditions, and the actual conditions encountered. The contract administrator must give an instruction to the contractor before the contractor undertakes any additional work. The contractor may then claim the cost of any additional work incurred as a variation.

If the contractor discovers any mineral deposit or object of interest or value at the site, it must immediately report the find to the contract administrator, since, for the purposes of the contract, such deposits or objects are the property of the owner. The contractor is required to secure and protect these deposits or objects. MW-1 requires the contract administrator to give instructions for their disposal; while AS4000 has no provision for dealing with this issue. MW-1 allows the contractor to claim for any costs incurred arising from the discovery, while AS4000 requires the contract administrator to assess the costs. The outcomes are identical since, in both contracts, the contract administrator is required to assess and certify any amount to be paid to the contractor as a deemed variation.

MW-1 requires the contractor to notify the contract administrator and any relevant authority if it discovers any dangerous or contaminated material, and allows the contractor to claim for any costs incurred arising from the discovery. MW-1 also requires the contractor to notify the contract administrator if it discovers that a neighbouring structure encroaches on the site or that there is a risk to the right of support of a neighbouring property, and allows the contractor to claim for any costs incurred arising from the discovery as for a latent condition.

MW-1: clauses F5–F9

The contractor must notify the architect within five working days of discovering on the site (*subclause F5.1*):

- **a 'latent condition' which may cause the contractor to incur additional cost or delay; or**
- **a 'valuable item'.**

'Latent condition' means any condition on, below or adjacent to the site which could not have been foreseen by a competent contractor after examining the site information and inspecting the site (*subclause F5.2*).

'Valuable item' includes minerals, money, treasure, fossils, archaeological remains, historic objects or relics (*subclause F5.3*).

All valuable items remain the property of the owner and the contractor must ensure that they are not removed, lost or damaged (*subclause F5.4*).

The architect must promptly give an instruction to the contractor as to how a latent condition or valuable item is to be dealt with (*clause F6*).

The contractor may make a claim to adjust the contract for the value of the work in complying with an instruction to deal with a latent condition or valuable item (*subclause F7.1*). The claim must be submitted and processed in accordance with section H of the contract (*subclause F7.2*; and see below under 'Contract sum adjustments).

The contractor must immediately notify the architect and any relevant authority if it discovers any dangerous or contaminated material (*subclause F8.1*).

'Dangerous or contaminated material' means material hazardous to persons or to the environment and which is not anticipated in the contract documents. It includes material which is only hazardous if disturbed or released from its location (*subclause F8.2*).

The contractor must comply with any written direction, official notice or order of the relevant authority and must immediately provide a copy of same to the architect. The contractor need not request an instruction from the architect (*subclause F8.3*).

The contractor may make a claim to adjust the contract *only* if the discovery which caused the relevant authority to take action was beyond the contractor's control (*subclause F8.4*).

The claim must be submitted and processed in accordance with section H of the contract (see below under 'Contract sum adjustments'). Any claim relating to a variation required by the relevant authority must be made in accordance with clause J8, which relates *specifically* to the discovery of dangerous or contaminated material (*subclause F8.5*; and see Chapter 6).

If the contractor discovers (*subclause F9.1*) that:

- a neighbouring structure encroaches on (that is, is partly located on or overhangs) the site; or
- carrying out the necessary work will prejudice the 'right of support' of (that is, it will undermine and destabilise) a neighbouring property

and the contract documents do not envisage such a situation, then the contractor:

- must ensure that any adjoining structure is stable without adversely affecting the situation
- must immediately suspend the necessary work in the vicinity of the situation
- must promptly request the architect to issue an instruction
- may treat the situation as a latent condition for the purpose of making a claim to adjust the contract.

The contractor must *not* suspend any necessary work which will not adversely affect the situation (*subclause F9.2*).

AS4000: subclause 24.3 and clause 25

Under clause 24, any valuable minerals, fossils, articles or objects of antiquity or of anthropological or archaeological interest, treasure troves, coins, and articles of value discovered at the site are the property of the Principal.

The Contractor must immediately notify the Superintendent of the discovery at the site of any such deposits or objects and must secure and protect them. If the Contractor incurs additional cost as a result of the discovery of such deposits or objects, then the Superintendent must assess the cost and add it to the contract sum (*subclause 24.3*).

'Latent conditions', are defined as physical conditions on and around the site which are materially different from those which could reasonably have been foreseen by a competent Contractor after examining the tender information, making reasonable enquiries as to risk allocation and inspecting the site (*subclause 25.1*).

The Contractor must notify the Superintendent of the general nature of any latent condition promptly upon discovering it and, where possible, before disturbing it. The Contractor must provide the Superintendent, on request, a statement of the condition, including any anticipated delay or cost incurred as a consequence, and any other information required by the Superintendent (*subclause 25.2*).

A latent condition produces a deemed variation (that is, a variation which does not require a Superintendent's direction – see Chapter 6). The valuation of the variation must include all costs incurred by the Contractor as a result of the condition, but excluding any costs incurred more than 28 days before notifying the Superintendent of the condition (*subclause 25.3*).

PROGRESS AND PROGRAMMING OF THE WORKS

A 'program', 'work program' or 'construction program' (also referred to as a 'schedule', 'work schedule' or 'construction schedule') is an essential part of the documentation for the management of any building or construction project. It is a statement in writing, usually in the form of a network bar chart, which shows the dates by which the various parts of the works are to be completed or the times within which those parts of the works are to be executed. A more detailed form of the program also shows the start and finish dates of all trades and the 'critical path' through the network, this being the longest path, which determines the earliest completion possible. The program may be a contract document.

MW-1 makes the contractor responsible for directing the sequence and timing of the works, and requires the contractor to provide a program which reflects these. This program is not a contract document.

AS4000 allows the contract administrator to direct the sequence and timing of the works, and requires the contractor to provide a program if requested by the contract administrator. This program *is* a contract document, and the contractor must comply with it.

In the event of the contractor failing either to proceed as required by the contract or to comply with the contract administrator's instructions to accelerate the pace of the work, the contract administrator has the ultimate deterrent at its command – termination, either of the contractor's employment or of the contract itself. (Termination is discussed in detail in Chapter 4.)

MW-1: subclause G2.1; clauses G5–6; G9–10 and N7

As we saw in Chapter 1, the contractor is responsible for directing the manner in which the works are carried out (*subclause G2.1*) – that is, for the construction methods used in constructing the works, for co-ordinating the works and for the sequence in which the works are constructed.

Within ten working days of being given possession of the site, the contractor must give the architect a program (of the sequence in which the works are to be constructed) (*subclause G5.1*), including:

- start and finish dates of major stages of the project and of any separable parts of the works
- the date for practical completion
- start and finish dates of all trades
- the critical path.

The program is not part of the contract (*subclause G5.2*) – that is, it is not a contract document.

Whenever the date for practical completion is adjusted by five or more working days or an agreed period (either since commencement or since the most recent updated program), the contractor must give the architect an updated program The updated program must show the changes to the previous program (*clause G6*).

If the owner so requests, the architect must instruct the contractor to amend the program. The contractor must then amend the program and comply with the amended program. However, the contractor may notify the architect that it cannot reasonably comply with the instruction (*subclause G9.1*).

This instruction must be treated as an urgent instruction (*subclause G9.2*).

The contractor may make a claim to adjust the contract for the

cost incurred in complying with an instruction to amend the program. The contractor may not make a claim if the instruction is due to the contractor's inadequate progress of the works, such that practical completion may not be achieved by the due date, or any other act or omission by the contractor (*subclause G10.1*).

Where the works are divided into separable parts, this clause applies to each part (*subclause G10.2*).

The claim must be submitted and processed in accordance with section H of the contract (*subclause G10.3*; and see below 'Contract sum adjustments').

The contractor must give the architect a program before the owner is required to make the first progress payment (*clause N7*; and see Chapter 8).

AS4000: clause 32

The Contractor must give the Superintendent reasonable advance notice of its requirements for information or instructions.

The Principal and the Superintendent need not, however, provide these earlier than could have been anticipated at the date for acceptance of tender.

The Superintendent may direct the sequence and timing of the work under the Contract, and the Contractor must comply with the Superintendent's direction. If the Contractor cannot reasonably comply, it must notify the Superintendent, giving the reasons.

A 'construction program' is defined as a statement in writing of the dates by which the various parts of the work under the Contract are to be completed or the times within which those parts of the work under the Contract are to be executed. It is deemed to be a contract document.

The Contractor must provide a construction program to the Superintendent if directed to do so, and must provide it within the time and in the form directed.

The Contractor must comply with a construction program, unless it has reasonable cause not to do so.

If the Contractor incurs additional cost as a result of a direction as to the construction program, then the Superintendent must assess the cost and add it to the contract sum. If the direction is given as a result of any act or omission by the Contractor, the additional cost is *not* added (*clause 32*).

Suspension of the works

'Suspension' of the works involves a temporary cessation of construction activity. Suspension may be initiated by either party to the contract on the grounds of default by the other party, for safety reasons, or in order to comply with a court order.

MW-1 allows the owner (through the contract administrator) to do so without advancing a reason, and later to instruct the contractor to recommence the works, again without advancing a reason. AS4000 requires the contractor to obtain the contract administrator's approval before suspending the works on the grounds of default by the owner.

The cost incurred by the contractor in suspending the works for the owner's default or in compliance with the contract administrator's instructions, where the contractor is not at fault, is added to the contract sum.

(Suspension of the works as a stage in the process of termination is discussed in Chapter 4.)

MW-1: clauses G11–G13

If the owner so requests, the architect must direct the contractor to suspend the whole of the works. The contractor must then promptly comply. If the architect does not instruct recommencement of the works within 15 working days, the contractor may remove from the site any materials or equipment intended for incorporation in the works, but not paid for by the owner, and any plant, tools and equipment belonging to the contractor (*subclause G11.1*). The owner does not need to give a reason for either instruction.

If the architect does not instruct recommencement of the works within 20 working days, the contractor may terminate its engagement (see Chapter 4) without first giving the owner notice of termination (*subclause G11.2*).

If the owner wishes to recommence the works after they have been suspended, the architect must instruct the contractor to recommence the works. The contractor must then promptly comply. If the contractor has left the site, it must return and recommence the works (*subclause G12.1*). This clause does not apply if the contractor has terminated its engagement (*subclause G12.2*).

The contractor may make a claim to adjust the contract for the costs incurred in complying with an instruction to suspend or recommence work (*subclause G13.1*). The claim must be submitted and processed in accordance with section H of the contract (*subclause G13.2*; and see 'Contract sum adjustment' below).

AS4000: clause 33

The Superintendent may direct the Contractor to suspend any part of the work under the Contract for any period of time (*subclause 33.1*), because of:

- **an act or omission by the Principal or those responsible to the Principal, by the Superintendent or by other contractors**
- **an act or omission by the Contractor or those responsible to the Contractor**

- safety concerns
- a court order.

The Contractor may suspend any part of the work under the Contract in the event of default by the Principal (see Chapter 4), but must obtain the Superintendent's approval to do so. The Superintendent may impose conditions of approval (*subclause 33.2*).

In the case of Superintendent's suspension, the Superintendent must direct the Contractor to recommence work under the Contract as soon as the reason for suspension no longer exists. In the case of Contractor's suspension, the Contractor may recommence work under the Contract at any time after giving reasonable advance notice to the Superintendent (*subclause 33.3*).

The Contractor must bear the cost of:

- any Contractor's suspension, other than in the event of default by the Principal
- any Superintendent's suspension that was necessary because of an act or omission by the Contractor or those responsible to the Contractor.

If the Contractor incurs either more or less cost as a result of suspension due to any other cause, then the Superintendent must assess the difference and add it to or deduct it from the contract sum (*subclause 33.4*).

Setting out the works

The owner (MW-1) or the contract administrator (AS4000) is required to provide to the contractor all survey marks and other information necessary for setting out the works. The contractor is required to set out the works accurately in accordance with the information provided. The owner is then responsible for the cost of rectifying all errors in setting out which arise from incorrect information having been provided to the contractor, while the contractor is responsible for the cost of rectifying all other errors.

MW-1 also requires the contractor to submit to the contract administrator a licensed surveyor's certificate to the effect that the setting out and levels accord with the information provided by the owner. AS4000 has no provision for dealing with this issue.

AS4000 also requires the contractor to protect all survey marks, and to reinstate any mark that is disturbed. MW-1 has no such provision.

MW-1: clause G1; subclause G2.1

As we saw in Chapter 1, the owner must give the contractor sufficient survey information to properly set out the works (*clause G1*).

The contractor must set out the works and engage a licensed surveyor to certify that the works are properly set out (*subclause G2.1*).

AS4000: clause 26

The Principal must ensure that the Superintendent supplies to the Contractor all the information and survey marks necessary for setting out the Works. The Contractor must set out the Works in accordance with the Contract (*subclause 26.1*).

The Contractor must promptly notify the Superintendent of any error in the setting out of the work under the Contract and must rectify such error unless the Superintendent directs otherwise within three days. If the error was due to incorrect information and survey marks, then the Superintendent must assess the cost and add it to the contract sum (*subclause 26.2*).

The Contractor must protect and maintain in their position all survey marks supplied by the Superintendent. The Contractor must promptly notify the Superintendent of any disturbance to a survey mark, and must reinstate the survey mark unless the Superintendent directs otherwise within three days. If the disturbance was caused by the Superintendent, the Principal or the Principal's employees, consultants or agents, then the Superintendent must assess the cost and add it to the contract sum (*subclause 26.3*).

Materials and workmanship

The owner may require the contractor to establish and maintain a quality assurance system in accordance with the owner's requirements.

All materials and workmanship must, by definition, be in accordance with the contract. AS4000 requires materials which are not specified to be suitable and new, and workmanship to be proper and tradesmanlike; while MW-1 has no provision for dealing with this issue.

The contract administrator may instruct the contractor to replace or otherwise rectify any defective or unsuitable materials or work at its own expense. AS4000 allows the contract administrator, as an alternative, to accept defective materials or work at a discounted value. MW-1 has no provision for dealing with this issue either.

The contract administrator may also order the testing of any materials or work, and may order the opening up, for inspection and testing, of any materials or work that may have been covered up. Where testing is not provided for in the contract, then the costs of opening up and testing are borne by the owner if the result of the test is satisfactory, and by the contractor if it is not. Where work to be tested was covered up without the contract administrator's approval, the cost of opening up is also borne by the contractor.

MW-1: subclause G2.2; clauses G7 and G8

The owner's requirements, if any, for a quality assurance system are stated in item 12, 'Quality assurance system', of schedule 1,

'Contract information'. Where the owner's requirements are so stated, the contractor must have that system in place before taking possession of the site. The contractor must inspect, test, record and rectify defects in the works accordingly (*subclause G2.2*).

The architect may instruct the contractor to open up for inspection any work that has been covered up, or to test any executed work other than as required by the contract (if it suspects any part of the work is defective in some way). The contractor must promptly comply with the instruction (*subclause G7.1*).

This instruction must be treated as an 'urgent instruction' (*subclause G7.2*).

The contractor may make a claim to adjust the contract for the cost incurred in complying with the instruction, unless the opening up or testing reveals that the work is defective (*subclause G8.1*). The claim must be submitted and processed in accordance with section H of the contract (*subclause G8.2*).

AS4000: clauses 28–30

The Contractor must supply all necessary materials, labour and plant for the execution of the work, unless otherwise stated in the Contract. The Superintendent may direct the Contractor to supply all particulars of, and arrange for the inspection of, any materials, machinery or equipment to be supplied or used in the work. The Superintendent may direct the Contractor not to remove (certain) materials or plant from the site. The Contractor must then not remove those materials or items of plant from the site without the Superintendent's approval (*clause 28*).

The Contractor must use suitable and new materials, and proper and tradesmanlike workmanship, unless otherwise stated in the Contract (*subclause 29.1*).

If the Contract requires quality assurance, the Contractor must plan, establish and maintain a quality system in accordance with those requirements, and must allow the Superintendent to monitor and audit the system, and those of subcontractors. However, the quality system is only an aid to the Contractor, which remains responsible for complying with the Contract (*subclause 29.2*).

The Superintendent may bring to the Contractor's attention as soon as practicable (as a prelude to rectification) any defective material or work discovered. (It should be noted that, at this stage, the Superintendent is not required to direct rectification of a defect, nor is any time frame for rectification stated.) If the Contractor does not rectify the defective material or work, the Superintendent may direct the Contractor to:

- remove the material from the site
- demolish the work
- reconstruct, replace or correct the work; or
- not deliver the material to the site.

If the Contractor fails to comply with the Superintendent's direction then, after eight days notice from the Superintendent of the Principal's intention to do so, the Principal may have the defective material or work rectified by others. The Superintendent must certify the cost of rectification, which will then become a debt due from the Contractor to the Principal (*subclause 29.3*).

Instead of directing the Contractor to rectify any defective material or work, the Superintendent may direct the Contractor that the Principal will accept the defective materials or work – at a reduced cost – producing a deemed variation (*subclause 29.4*).

The Superintendent may direct the Contractor to rectify defective material or work at any time before the end of the last defects liability period (*subclause 29.5*; and see Chapter 9).

The Superintendent may direct that any work under the Contract be tested at any time before the end of the last defects liability period. The Contractor must provide all necessary assistance, samples and access for the testing (*subclause 30.1*).

The Superintendent may direct that any part of the work must not be covered up without its prior direction (*subclause 30.2*).

Tests must be conducted (*subclause 30.3*):

- as provided in the Contract
- by the Superintendent; or
- by a person (which may include the Contractor) nominated by the Superintendent.

If either the Superintendent or the Contractor is to conduct a test, that party must give reasonable notice to the other that the test is to take place. If the other party fails to attend, the test may still take place (*subclause 30.4*).

If either the Superintendent or the Contractor is to conduct a test, but delays in doing so, then the other party may conduct the test after giving reasonable notice of its intention (*subclause 30.5*).

The Contractor must make good the work under the Contract after the completion of testing. The party conducting a test must promptly give the results to the other party, and to the Superintendent (*subclause 30.6*) – which may, of course, be either party in this instance.

The Principal must bear the costs of all testing, unless (*Subclause 30.7*):

- the Contract states otherwise
- the test is ordered because of a failure by the Contractor to comply with the Contract; or
- the test reveals such a failure.

There is no provision for assessment or certification of these costs, but one can assume that the Superintendent would certify the cost of rectification, which would then become a debt due from the Principal to the Contractor.

CONTRACT SUM ADJUSTMENTS

The contract sum

The 'contract sum' is the amount to be paid by the owner to the contractor for constructing the works. It is adjusted from time to time to account for events that take place during the life of the contract and is, therefore, a progress report of the owner's total financial commitment at any time during the currency of the contract. It is common practice for a contract administrator, when directing an adjustment to the contract sum, to state the adjusted contract sum both before and after the adjustment.

MW-1 defines the contract sum ('contract price') as the cost of building work plus GST. However, it also warns that the contract sum may be subject to adjustment due to any of a list of provisions in the contract, including variations to the works and adjustments for the respective provisional sums. Thus the contract sum varies throughout the duration of the contract, since every contract sum adjustment is incorporated in the contract sum as and when the adjustment is approved.

AS4000 defines the contract sum as the 'lump sum', or the product of the rates and quantities in a bill of quantities or a schedule of rates, or the aggregate of both the foregoing, including provisional sums, but excluding any adjustments. Hence it excludes not only variations, but also adjustments to the respective provisional sums. In other words, it *appears* to remain fixed for the duration of the contract. However, as we will see later in this chapter under 'The adjustments', no less than nine different clauses and subclauses provide for various amounts to be added to or deducted from the contract sum.

The conclusion to be drawn from this apparent contradiction is that the contract sum in AS4000 remains fixed *only* for the purpose of calculating such amounts as security, whereas for all other purposes it varies throughout the duration of the contract, since every contract sum adjustment is incorporated in the contract sum as and when the adjustment is approved.

It is important to be aware that the difference between the two contracts is purely formal in this regard, since the net outcome in terms of payments actually made to the contractor is virtually identical.

MW-1: clause N1

As we saw in Chapter 1, the term 'contract price' means the cost of the building work plus GST (*section S*), as shown in item 4, 'The contract price', of the 'Introduction'.

The contract price is a lump sum price (*subclause N1.1*), which the contractor acknowledges includes:

- everything reasonably required to complete the works
- all prime cost and provisional sums stated in schedule 6, 'Provisional sums', and schedule 7, 'Prime cost sums'
- installation of all items to be supplied by the owner and installed by the contractor as listed in schedule 8, 'Items to be supplied by owner for incorporation in the works'
- rise and fall (the implication here is that there will be no adjustment for rise and fall: see Chapter 8)
- all statutory taxes and charges which applied five working days before the close of tenders (meaning that the contractor is not expected to keep checking the level of these beyond one week before submitting a tender)
- import duties and tariffs which applied five working days before the close of tenders
- exchange rates which applied five working days before the close of tenders
- relevant industrial awards, agreements, allowances and levies; and
- GST.

Since this clause places no time limit on costs arising from industrial awards, agreements and so on, one might assume that the contractor accepts full responsibility for all future changes in these. However, a more reasonable interpretation would be that the time limit is either the close of tenders or, as for the other variables cited above, five working days before that date.

The contract price does not include any items to be supplied and installed by the owner as listed in schedule 8, or any other items specifically excluded by the contract (*subclause N1.2*).

AS4000: clause 1

As we saw in Chapter 1, the term 'contract sum' means:

- the lump sum
- the product of the rates and quantities in a bill of quantities or a schedule of rates; or
- the total of both the above.

It includes provisional sums, but excludes any adjustments (*clause 1*).

The contract sum defined in this way is the contract sum at the time of signing the contract and determines the amount of security, which remains fixed during the life of the contract. This definition is not strictly accurate, as we will see immediately below. There is in fact a long list of events that may lead to costs being incurred which are then to be added to or deducted from the contract sum, thus effectively adjusting it for budgetary purposes if for no other.

The adjustments

The term 'contract sum adjustment' does not appear in either MW-1 or AS4000. It is used in this text as shorthand for the terms 'the adjustment to the contract price' (MW-1) and 'the cost … to be added to or deducted from the contract sum' (AS4000).

Contract sum adjustments are additions to or deductions from the total amount of money which is payable by the owner to the contractor under the contract. The most common causes that give rise to contract sum adjustments include:

- routine and urgent variations
- errors or discrepancies in the contract documents
- adjustment of provisional and prime cost sums
- adjustment of time costs
- deductions for uncorrected work
- costs arising from (unforeseen) site conditions.

The adjustments are made to the contract sum strictly for budgetary purposes, and the amounts by which the contract sum is adjusted are not paid to the contractor until the relevant work has been carried out.

MW-1 contains a detailed list of the events for which the contract sum may need to be adjusted. While AS4000 does not contain such a list, it does contain reference to a number of similar applicable events.

As noted earlier in this chapter, the difference between the two contracts is purely formal in this regard, since the net outcome in terms of payments actually made to the contractor is virtually identical.

It may also be helpful to distinguish informally between three categories of contract sum adjustments:

- variations (Chapter 6)
- adjustments that are not variations but are also required to be assessed by the contract administrator
- costs which are already established and do not, therefore, need to be valued.

In any case, all three categories must be treated in the same way, although it is certainly useful to keep separate and in the one place all items in the same category, such as variations.

MW-1: clauses H1–H4; H6

Following an instruction or, if none has been given, an event that will result in a claim, the contractor must (*subclause H1.1*):

- promptly notify the architect of its intention to make a claim to adjust the contract
- submit the detailed claim to the architect within an agreed time or, if no time is agreed, within 20 working days.

The contractor must submit such a claim for a variation in accordance with clause J4 (*subclause H1.2*; see Chapter 6).

The contractor need not notify the architect of its intention to make a claim if the claim has resulted from an urgent instruction, suspension of the works or a delay in the progress of the works. However, the contractor must give the detailed claim to the architect within 20 working days after receiving the urgent instruction or the end of the suspension or the delay (*subclause H1.3*).

If the contractor is entitled to make a claim resulting from the discovery of dangerous or contaminated material (if the discovery of these was beyond the contractor's control), the contractor must promptly notify the architect of its intention to make a claim. The contractor must submit the detailed claim to the architect within an agreed time or, if no time is agreed, within 20 working days after completion of the necessary work (*subclause H1.4*).

A claim to adjust the contract (*clause H2*), must include:

- reference to the instruction that resulted in the claim or, where none has been given, details of the event and the basis of the claim
- a breakdown by trade of the extra costs, including preliminaries and a reasonable allowance for the contractor's overheads and profit, not greater than the rate stated in item 14 of schedule 1; or, if nothing is stated, 10 per cent
- reference to bill of quantities rates and prices if applicable
- reference to schedules of rates if applicable
- any documentation required to be provided under relevant legislation
- any adjustment to the date for practical completion required by the contractor
- any adjustment of time costs associated with the claim (see Chapter 7)
- detailed records of the cost of carrying out a variation and details of any quotation accepted for the variation (see Chapter 6).

Presumably, the requirement for records applies only to that part of a variation for which a quotation has *not* been accepted.

The architect must promptly assess a claim to adjust the contract and, in that process, review and take into account (*subclause H3.1*):

- the contractor's detailed claim and any further information requested by the architect
- the bill of quantities if applicable
- the schedule of rates if applicable
- the effect of the claim on the date of practical completion
- a reasonable allowance for the contractor's overheads and profit (presumably equal to the allowance refered to in clause H2).

The architect must ask the contractor for any further information that may be required (*subclause H3.2*); and the contractor must promptly give to the architect any further information reasonably requested (*subclause H3.3*).

The architect must assess the claim and, within 20 working days after receiving it, issue to the contractor and the owner its decision as to adjustment of both the contract price and the date for practical completion where applicable (*subclause H4.1*).

The contractor must carry out the works in question but, where no agreement has been reached, may dispute the architect's decision under the procedure for settlement of disputes (*subclause H4.2*; and see Chapter 4).

Where the contractor has *not* made a claim to adjust the contract for the outcome of an instruction that relates to a variation or to a listed cause of delay (see Chapter 7), the architect under clause H6 may nevertheless adjust the contract at any time up to the issue of either the final certificate (Chapter 9) or a certificate of termination (*clause H6*; and see Chapter 4).

The 'Introduction' lists the provisions of the contract on account of which the contractor may make a claim to adjust the contract as follows:

- clause B3 – discrepancies or omissions in contract documents
- clause E7 – failure to provide evidence of insurance
- clause F7 – discovery of latent condition or valuable item
- clause F8 – discovery of dangerous or contaminated material
- clause G8 – opening up or testing of the works
- clause G10 – amendment to program
- clause G13 – suspension and recommencement of the works
- clause G16 – act or omission by a separate contractor
- clause J1 – variation to the works
- clause J7 – official notice from an authorised person
- clause J11 – urgent variation to the works
- clause K4 – adjustment for provisional or prime cost sum
- clause K5 – adjustment for provisional sum – fee or charge
- clause L1 – adjustment of time with costs
- clause M7 – failure to issue notice of practical completion
- clause M8 – division of the works into separable parts

- clause M10 – possession of the works before practical completion
- clause N8 – failure to issue certificate
- clause N15 – interest on overdue amounts
- clause R10 – change in relevant legislation.

AS4000

The Contract requires the Superintendent, by the text of the relevant clauses, to assess or value certain costs incurred by the Contractor, and to add these to or deduct them from the contract sum where applicable. It does not provide a list of the events which lead to such costs being incurred.

However, these events are:

- clause 3 – difference between a provisional sum and the price for the work carried out under it
- subclause 8.1 – discrepancies in the contract documents
- subclause 11.2 – changes in legislative requirements
- subclause 24.3 – protection of minerals, fossils and relics
- subclause 26.2 – errors in setting out due to incorrect data
- subclause 26.3 – reinstatement of survey marks
- clause 32 – changes to a construction program
- subclause 33.4 – cost of Superintendent's suspension
- subclause 36.4 – variations.

The Contract also requires the Superintendent, again by the text of the relevant clauses, to certify certain costs incurred by one of the parties as moneys 'due', or 'due and payable', from one party to the other. However, it again does not provide a list of the events which lead to such costs being incurred.

When a cost is certified as 'due', it may be included in the next progress certificate and paid in the next progress payment. The events which lead to a cost being certified as due are:

- clause 12 – failure by the Contractor to protect people and property
- clause 13 – failure by the Contractor to take urgent action
- clause 27 – failure by the Contractor to keep the site clean and to remove temporary works and construction plant at practical completion
- subclause 29.3 – failure by the Contractor to rectify defective work
- subclause 36.2 – detailed quotation by the Contractor for a proposed variation.

When a cost is certified as 'due and payable', it must be paid *immediately*. The events which lead to a cost being certified as due and payable are:

- subclause 19.2 – failure by the Contractor to produce proof of insurance
- subclause 34.7 – liquidated damages
- subclause 34.8 – bonus for early practical completion

- subclause 34.9 – delay damages
- clause 35 – failure by the Contractor to rectify defects during the defects liability period
- subclause 39.6 – work taken out of Contractor's hands
- subclause 39.9 – damages for suspension due to Principal's default
- subclause 41.3 – claim under a prescribed notice.

NOTICES

Notices of completed, intended and anticipated actions and events are formal letters, required by the contract to be given from time to time by one party to the other. A notice may be delivered either by hand or sent by post to the person to whom the contract requires it to be given, either at the address stated in the contract or at a properly notified new address. Most notices must be given within a time limit prescribed by the contract. Where no time limit is prescribed, the notice is required to be given as soon as practicable.

All notices given by either party are, naturally, required to be in writing. Any notice should quote the provision of the contract under which it is given. The notice should also specify the time frame within which a response is to be given, irrespective of whether the time frame is one that is prescribed by the provision of the contract being quoted or, in the case of a notice given to the contractor, is being set by the contract administrator as a reasonable time in a particular instance.

Both MW-1 and AS4000 deem a hand-delivered notice to have been 'served' (that is, received by its recipient) when it was delivered; a notice sent by post to have been served three days after posting; and a notice sent by fax to have been received when the sender receives an error-free transmission report from the correct fax number.

AS4000 also requires the contractor to give to the owner and the contract administrator a 'prescribed notice', which is a notice in a prescribed form, when submitting a claim for delay damages and any claim which would otherwise have been included in the final payment claim.

Example 3.2 is a model notice from the contract administrator to the contractor, which fulfils all contractual requirements for such a notice for any purpose. The wording of the model is in a basic form that would suit only the least complex of circumstances, in which a single sentence can encompass all the ramifications of the notice. The format of a notice from the contractor to the contract administrator is almost identical in most cases (see Example 3.3, page 98).

EXAMPLE 3.2
CONTRACT ADMINISTRATOR'S NOTICE TO THE CONTRACTOR

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144
[date]

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to clause [*clause number and heading*] of the Contract, you are hereby notified that [*description of the subject of the notice*] and that you are required to [*description of the required action if relevant] within [number of days if relevant*] days.

Yours faithfully

Bossie, Boots Pty Ltd
(The Architect/Superintendent)
att [*if relevant*]
Copy to: The owner/Principal [*if required*]

MW-1: clauses R1 and R2

A document may be sent to another party (*subclause R1.1*) by:

- delivering it by hand or by mail to the person representing the party at the address stated in item 1, 'Execution of the contract', of the 'Introduction'
- faxing it to that person at the fax number stated in item 1
- emailing it to that person at the email address stated in item 1 or to a properly notified email address, provided that a signed copy is also sent by hand, mail or fax.

A document may be faxed or emailed to a party's representative to a fax number or email address other than that of the party, in which case a copy must also be sent – by hand or by mail – to the party's address (*subclause R1.2*).

All changes of address, fax number or email address must be notified to the other party. From five working days after notice of a change has been received, documents must be sent only to the latest address, fax number or email address (*subclause R1.3*).

A document sent by hand is deemed to have been received when it is delivered (*subclause R2.1*).

A document sent by mail is deemed to have been received three working days (seven working days for overseas mail) after it was posted (*subclause R2.2*).

A document sent by fax is deemed to have been received when the sender receives an error free transmission report from the correct fax number. Any document thus 'received' after the receiver's normal business hours is deemed to have been received at the start of the next working day (*subclause R2.3*).

A document sent by email is deemed to have been received when a copy sent by hand, mail or fax is properly received (*subclause R2.4*).

AS4000: clauses 7 and 41

All changes of address or fax number must be notified to the relevant persons.

A notice and any other document and is deemed to have been received (*clause 7*) if it is delivered to the address of that person stated in the Contract or to a new address properly notified; and on whichever is the earliest date of:

- **the date of actual receipt**
- **the date of receipt of a correct transmission report of a fax; or**
- **three days after posting.**

A prescribed notice may be given by either party to the other party and to the Superintendent. It must be given as soon as a party becomes aware of its right to make a claim; or, alternatively, the party may give the other party a notice of dispute (see Chapter 4). A prescribed notice must set out as fully as possible the circumstance on which the claim is based, the contractual basis for the claim, and the amount of the claim. A prescribed notice need not be given for any claim if another clause already requires its notification (for instance any routine claim such as a progress claim or a claim for extension of time). The Contractor must give a prescribed notice to the Principal and the Superintendent for any claim for delay damages (see Chapter 7), and for any claim which would otherwise have been included in the final payment claim (*subclause 41.1*). It is unclear to what categories of claim this last condition applies.

A party may claim damages for breach of contract if the other party does not submit a claim by a prescribed notice when it is

required to do so, although this does not bar nor invalidate the claim (*subclause 41.2*). That is, there is a time bar for such claims (see also Chapter 4).

Example 3.3 is a model 'prescribed notice' from the Contractor to the Superintendent, which fulfils all contractual requirements for such a notice. The wording of this model too is in a basic form that would suit only the least complex of circumstances, in which a single sentence can encompass all the ramifications of the prescribed notice. Note that, while the Contractor is not obliged to title the notice specifically as a 'PRESCRIBED NOTICE', this is good practice as it draws attention to the special nature of the claim.

EXAMPLE 3.3
CONTRACTOR'S 'PRESCRIBED NOTICE' (AS4000)

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175
[date]

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

PRESCRIBED NOTICE

Pursuant to clause 46.1, 'Contractor's Prescribed Notice', of the Contract, you are hereby notified as a consequence of [*the circumstances on which the claim is based*], which occurred on [*the date on which the circumstances occurred*], that we claim the amount of [*the amount of the claim*].

Yours faithfully

Blitzkrieg Constructions Pty Ltd
(The Contractor)

REVIEW

As the initiating party to a building and construction contract, the owner, which is usually the less expert of the two parties involved, appoints a professional contract administrator to administer the contract on its behalf.

The contract administrator acts as the owner's agent, but also has a major function as assessor, valuer and certifier, in which capacity it has a responsibility to deal fairly between the two parties. The contract administrator may appoint one or more representatives to deal with specific matters, all with clearly defined responsibilities.

The contractor must also appoint a representative on the site.

Instructions and information given by or to an official representative of either party are deemed to have been given by or to the party.

MW-1 makes the contractor responsible for the sequence and timing of the works, while AS4000 allows the contract administrator to direct these. AS4000 also allows the contract administrator to demand that the contractor provide a detailed work program, with which the contractor must then comply. Either party may suspend the works in the event of a serious breach of contract by the other, but AS4000 requires the contractor to obtain the contract administrator's prior approval.

'The works' are all the work that the contractor is contractually obliged to hand over to the owner on completion. AS4000 also refers to 'the work under the contract', which includes both the works and any temporary works; while MW-1 refers to this broader entity as 'the necessary work'. Working hours and working days may be prescribed in the contract.

The contractor is required to keep the site clean and tidy at all times and to allow the owner and the owner's consultants reasonable access to the site.

The contractor is also required to take urgent action where necessary for reasons of safety.

The contract administrator may direct the contractor to remove from the site any employee or subcontractor considered to be incompetent, negligent or guilty of misconduct.

The contractor is required to notify the contract administrator of the discovery of any latent condition, valuable item, or dangerous or contaminated material. The contract administrator is then required to direct the contractor as to the process to be followed.

The contractor is responsible for setting out the works on the basis of information supplied by the owner and then constructing the works, using materials and workmanship which conform with the contract. The contract administrator may reject any defective

materials or workmanship, which the contractor must then replace or rectify. The contract administrator may order tests to be carried out on materials and workmanship suspected of being defective. Responsibility for the cost of additional testing lies with the contractor if the work proves to be defective, and with the owner if it does not.

Either party may suspend the works on the grounds of default by the other party, for safety reasons, or in order to comply with a court order.

Contract sum adjustments are additions to or deductions from the total amount payable to the contractor on account of specified events that may occur during the life of the contract. These may include variations, adjustment of provisional sums, latent conditions and the like. Even though an adjustment has been made, the amount involved is not payable to the contractor until the work has been carried out.

Notices that are required by the contract to be given by either party to the other may be delivered:

- by hand or by post to the appropriate person at the address stated in the contract
- by fax to the fax number stated in the contract
- by email to the email address stated in the contract; or
- by any of these means to a properly advised new address or fax number or email address.

A notice must be received within the time stated in the contract or, if a time is not stated, within a reasonable time. AS4000 requires a prescribed form of notice for claims relating to delay damages and for any claim which would otherwise have been included in the final payment claim.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- section A, 'Overview' (clauses A2, A4, A6 and A7)
- section F, 'The site' (clauses F2 and F5 to F9)
- section G, 'Building the works' (clauses G1 to G3 and G5 to G13)
- section H, 'Claims to adjust the contract' (clauses H1 to H4 and H6)
- section J, 'Variation to the works' (clauses J9 to J11)
- section N, 'Payment for the works' (clauses N1 and N7)
- section R, 'Miscellaneous' (clauses R1 and R2)
- section S, 'Definitions'
- schedule 1, 'Contract information'
- schedule 6, 'Provisional sums'
- schedule 7, 'Prime cost sums'
- schedule 8, 'Items to be supplied by owner for incorporation in the works'.

AS4000 – 1997 *General conditions of contract*:

- clause 1, 'Interpretation and construction of contract'
- clause 3, 'Provisional sums'
- clause 7, 'Service of notices'
- clause 13, 'Urgent protection'
- clause 20, 'Superintendent'
- clause 21, 'Superintendent' representative'
- clause 22, 'Contractor's representative'
- clause 23, 'Contractor's employees and subcontractors'
- clause 24, 'Site'
- clause 25, 'Latent conditions'
- clause 26, 'Setting out the Works'
- clause 27, 'Cleaning up'
- clause 28, 'Materials, labour and construction plant'
- clause 29, 'Quality'
- clause 30, 'Examination and testing'
- clause 31, 'Working hours'
- clause 32, 'Programming'
- clause 33, 'Suspension'
- clause 41, 'Notification of claims' (subclauses 41.1 and 41.2)
- annexure part A.

Aqua Group, Hackett, M and Robinson, R (2003), *Pre-Contract Practice and Contract Administration for the Building Team*, Blackwell Science, Oxford:

- chapter 11, 'Meetings'
- chapter 12, 'Site duties'
- chapter 13, 'Instructions, variations and post-contract cost control'.

Horan, T (1998), 'The role of the superintendent in contract administration', *The Building Economist*, December, pp 28–34.

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Ramus, J and Birchall, S (1996), *Contract Practice for Surveyors*, 3rd Edition, Laxton's (Butterworth-Heinemann), Oxford:

- chapter 2, 'Building procurement: Traditional methods'
- chapter 3, 'Building procurement: Alternative methods'
- chapter 6, 'The contract'.

Scotford, A (1989), 'QS role in building contracts', *The Building Economist*, vol 28, no 1, pp 19–21.

REVIEW QUESTIONS

3.1 Briefly explain the reasons for the presence of the contract administrator in standard building and construction contracts, as well as the role and functions of the contract administrator.

3.2 What is the procedure for giving instructions, and what remedies are available to the contract administrator in the event of non-compliance by the contractor?

3.3 Explain whether (and, if so, how) the contract administrator can delegate part of its work under the contracts studied, the extent of that delegation, and its limitations.

3.4 What are the procedures under the contracts studied for monitoring the progress of the work, and the sanctions available to the contract administrator in the event of unsatisfactory progress?

3.5 Describe the responsibilities of both the owner and the contractor under the contracts studied for setting out the works.

3.6 Explain the contractual requirements for the quality of the materials used and the standard of workmanship. Discuss also the nature and extent of the contract administrator's authority to reject unsatisfactory work and to test work suspected of being defective, as well as the allocation of the costs of testing.

3.7 Describe the nature of contract sum adjustments under the contracts studied, the reasons for such adjustments, and how they are handled.

3.8 Describe the nature and form of notices under the contracts studied, and the requirements for their despatch.

3.9 What are the respective roles and powers under the contracts studied of:

(a) the contract administrator
(b) the contract administrator's representatives?

3.10 Describe the requirements under the contracts studied for:

(a) commencement of the works
(b) progress of the works
(c) suspension of the works.

3.11 Describe the extent of the contract administrator's authority under the contracts studied in regard to:

(a) the contractor's employees and subcontractors on the site
(b) cleaning up the site
(c) objects of interest or value discovered at the site.

CHAPTER 4

DEFAULTS AND DISPUTES

OVERVIEW

If a contract is a formal agreement to perform work in exchange for money, then what happens if either the work is not performed or the money is not paid as and when agreed? In other words, what if either party 'defaults' – that is, fails to honour its commitments under the contract?

What happens if the parties disagree as to what has actually transpired or what is to be done next or who is to pay for it? If there is a dispute over a matter of fact, or a contract administrator's instruction, or the extent of a contractual obligation?

This chapter is about defaults and disputes, which are often brought about by such diverse factors as business failure, lack of communication, incompetence, poor planning and sheer bloody-mindedness on the part of the owner, contractor, or contract administrator and, in a minority of cases, just plain bad luck. Mainly, it is about what these defaults and disputes might be and how they may be dealt with in the building and construction industry.

The reader is presented with a comprehensive view of the nature both of defaults of obligation and of other disputes in a building and construction project, as well as of the contractual procedures under which these will be resolved. It answers the following frequently asked questions:

- What constitutes default under a building and construction contract?
- What is meant by termination of a building and construction contract?
- Who may terminate a contract and under what circumstances?
- What are the major consequences of termination?
- What constitutes a dispute? What steps must be taken before referring the dispute to mediation, expert determination, arbitration or litigation?

- **Who appoints the mediator, expert or arbitrator?**
- **What are the parties' obligations during a dispute?**

INSOLVENCY

Being insolvent means having insufficient funds to pay one's debts. Inability to pay as a result of insolvency is probably the most compelling cause of default, that is, failure to fulfil one's obligations under a contract.

For very sound reasons, it is an offence to continue to trade or otherwise transact business while insolvent. Consequently, insolvency is a matter of considerable concern to all those involved in business dealings of any kind, and a party to a contract is rightly concerned if it becomes apparent that the other party is, or has any *likelihood* of becoming, insolvent. Since insolvency effectively rules out all business activity, it makes fulfilment of further contractual obligations impossible, even with the best will in the world. Indeed, it makes default virtually unavoidable.

In the context of a building and construction contract, insolvency of a party is defined as any one of a number of actions by a court, by the party itself or by the party's creditors which takes away from that party control of its assets, and that is likely to *lead* to it defaulting.

Insolvency, or *potential* insolvency, becomes apparent from the actions either of the party or of its creditors. Such actions may include steps taken to wind up the party, to declare it bankrupt, to settle its debts for a proportion of their face value, or to install a liquidator, receiver or official manager. All these actions involve the other party to the contract in the high *probability* of unwarranted financial risk or loss.

In some instances, the appointed administrator of an insolvent company may wish to continue its business in an attempt to trade its way out of trouble. Nevertheless, a party with which the insolvent company has a contract may not wish to take the risk, to its own potential detriment, of continuing to deal with a potential bankrupt.

While insolvency does not, of itself, constitute a default under the contracts studied, the remedies for insolvency are virtually the same as those for default.

MW-1: section S

As we saw in Chapter 1, an 'insolvency event' means any occurrence that indicates or predicts a party's actual or potential inability to pay current or future debts. Insolvency occurs (*section S*), when a party:

- **is declared insolvent**

- has a court order for payment made against its assets, including its income
- arranges for partial payment in full discharge of its debts
- is made bankrupt
- has a provisional liquidator, liquidator, receiver, receiver and manager, administrator, scheme administrator or controller appointed to it or over its assets
- has a trustee in bankruptcy, interim receiver or controlling trustee appointed to it or over its assets.

AS4000: subclause 39.11

Insolvency of a party occurs (*subclause 39.11*), when that party:

- advises that it is insolvent
- is made, or steps are taken to make it, bankrupt
- attempts to arrange, or its creditors attempt to arrange, for partial payment in full discharge of its debts
- is placed, or its creditors attempt to have it placed, under official management
- has a receiver of its property appointed
- has procedures commenced for its winding up
- has a court order for payment made against it.

DEFAULT

Default by a party to a contract is its failure, through either inability or unwillingness, to fulfil its obligations under the contract. Either the owner or the contractor is capable of committing a default, which may be any one of a number of specified actions or omissions, or a *substantial* breach of the contract (a breach a party would probably start legal proceedings over). A *minor* breach of the contract does not constitute a default.

Neither MW-1 nor AS4000 contains an explicit definition of default, but each cites specific circumstances that constitute default or breach of substantial obligation by either party. Both contracts at times use the terms 'default' and 'breach' interchangeably: under AS4000 either party may 'commit a substantial breach'; under MW-1 the contractor may 'fail to meet a substantial obligation', whereas the owner may 'default'!

In the descriptive parts of this text, the terms are used in the following sense:

- 'breach' is used to mean any act or omission which breaches (that is breaks, or is not permitted by) the contract, which may or may not constitute a default
- 'default' is used to mean an act or omission which is specifically defined as a default, or a 'substantial breach' of the contract.

'Repudiation' of the contract is the most extreme form of default. It involves rejecting the contract by denying that it exists, or, if it exists, that one is not bound by it. By virtue of its extreme nature, direct repudiation is exceedingly rare. Somewhat less rare, indirect cases are the specified acts or omissions that some contracts *deem* to constitute repudiation of the contract.

In a highly confrontational contractual atmosphere, the parties may be constantly and aggressively attempting to out-manoeuvre each other. It is not altogether unknown in such circumstances for one party, in responding to the other party raising the stakes with a drastic action or contractual manoeuvre, to then formally 'accept' the other party's 'repudiation' of the contract.

Default by the contractor

Default by the contractor consists of acts or omissions such as suspending or failing to proceed with the work, using improper materials or workmanship, refusing to remove defective work, providing a false statutory declaration that workers and subcontractors have been paid, and failing to provide security or to produce evidence of insurance.

Default by the contractor is referred to in MW-1 as occurring when the contractor 'breaches a substantial obligation', but is not further defined. In AS4000, it is referred to as occurring when the contractor 'commits a substantial breach' of the contract, and is defined in detail.

MW-1: clause A1

Default by the contractor is nowhere defined, except inasmuch as it is referred to in clause Q1 (see page 110) as occurring when the contractor breaches a substantial obligation under the contract. While there may be *implicit* obligations which the contractor must fulfil, these would be subject to legal interpretation and therefore cannot usefully be examined here. The contractor's *explicit* obligations, on the other hand, can and will be examined.

As to what constitutes a 'substantial' obligation, this is far from clear-cut, as it may sometimes depend on the circumstances pertaining at the time of the alleged breach. However, it may be safely assumed that 'breaches of substantial obligation' under MW-1 would be in general terms very similar to the 'substantial breaches' listed below under AS4000.

As we saw in Chapter 1, the contractor's obligations (*subclause A1.1*) are to:

- **commence the works within ten working days after being given possession of the site**
- **carry out the works diligently and in accordance with the contract**

- bring the works to practical completion by the date for practical completion (see Chapter 9)
- comply with any instruction from the architect (see Chapter 3), including immediately complying with any urgent instruction
- comply with all other obligations under the contract, including any relevant legislation.

The last point is effectively a catch-all item, under which any other obligation may be ruled a 'substantial' obligation.

As we also saw in Chapter 1, clauses F2 and G2 set out the contractor's obligations in relation to the site and to building the works respectively. These, however, are not separate obligations but are implied by the above.

AS4000: subclauses 39.1–39.2

If either party breaches or repudiates the Contract, the other party may seek to recover damages or exercise any other right (*subclause 39.1*). This will usually be through civil court action.

'Substantial breach' (default) by the Contractor (*subclause 39.2*), includes but is not limited to:

- failing to provide security
- failing to provide evidence of insurance
- failing to comply with a direction as to defective work
- failing to use materials or standard of work specified
- unauthorised suspension of work (that is, other than as a consequence of default by the Principal)
- unauthorised departure from a construction program
- failing to proceed quickly enough where there is no construction program
- providing a false statutory declaration as to the payment of workers and subcontractors.

Here, the catch-all mechanism is the phrase 'includes but is not limited to', which introduces the list of substantial breaches.

Default by the owner

Default by the owner consists of acts or omissions by the owner, such as failing to give the contractor possession of the site, failing to lodge security or to provide evidence of insurance, suspending the works for an extended period, failing to pay an amount certified as payable to the contractor, failure by the contract administrator to issue a certificate of practical completion, and failing to meet any other obligation under the contract.

MW-1 and AS4000 provide differing lists of barely matching potential defaults by the owner. However, MW-1 also provides a list

of the owner's obligations, the breach of which, if ruled substantial, *might* constitute a default – thus bringing the two contracts somewhat closer together on this issue.

MW-1: clauses A4 and Q11

As we saw in Chapter 1, the owner's obligations (*subclause A4.1*) are to:

- obtain from statutory authorities and give to the contractor any approvals from statutory bodies required to commence the works
- obtain from neighbouring owners any 'easements' (that is, access) required before the works can commence
- give possession of the site to the contractor in accordance with the contract
- pay the contractor the contract price
- comply with all other obligations under the contract.

The owner must appoint an architect to design, document and administer the works and must indemnify the contractor against any liability arising from any action or inaction on the part of the architect or of any other consultant engaged by the owner for the works (*subclause A4.2*).

The owner must immediately inform the architect and the contractor if it is likely to become financially incapable of carrying out its obligations under the contract (*subclause A4.3*; and see subclause A4.1 above).

Default by the owner (*clause Q11*), is defined as:

- failure to make a progress payment on time (see Chapter 8); or
- failure to meet any other substantial obligation under the contract.

The second item here is another catch-all item, under which any other obligation may be ruled a *substantial* obligation.

Note also that two major defaults which are not specifically mentioned above, but are presumably intended to be covered by the catch-all provision as 'other substantial obligations', are made explicit in other clauses:

- suspending the works for more than 20 working days (see subclause G11.2; and Chapter 3)
- failure by the architect to issue a progress certificate (clause N5, subclauses Q12.1 and Q13.1; and Chapter 8).

AS4000: subclause 39.7

Substantial breach by the Principal (*subclause 39.7*), includes but is not limited to:

- failing to provide security (see Chapter 2)
- failing to provide evidence of insurance (see Chapter 2)

- failing to give the Contractor possession of sufficient of the site within the time stated in item 31, of annexure part A; or, if nothing is stated, within 14 days of the time for giving possession (see Chapter 1)
- failing to make a payment due under the Contract (see Chapter 8)
- failure by the Superintendent to issue a certificate of practical completion or to give the Contractor the reasons for its non-issue (see Chapter 9).

TERMINATION

Termination, in the context of a building and construction contract, is the unilateral cancellation either of the contract, or of the contractor's engagement under the contract by either party on the grounds of insolvency or default by the other. In the descriptive parts of this text, the term 'termination' is used as a generic term covering both. Neither contract contains an explicit definition of termination, but both spell out the details of the consequences of termination and the procedures to be followed by both parties.

Termination, the most extreme action provided for under a building or construction contract, may be initiated by either the owner or the contractor under any of the following circumstances:

- actual or impending insolvency of the other party
- default or substantial breach of contract by the other party
- 'frustration' of the contract.

Termination by the owner

The owner may terminate either the contract (AS4000) or the contractor's employment under the contract (MW-1) if the contractor becomes insolvent.

Where the contractor commits any of the defaults described earlier in this chapter under 'Default by the contractor', the owner under MW-1 may terminate the contractor's engagement under the contract. Where, on the other hand, the contractor under AS4000 commits a default, the owner has the option either to terminate the contract or, alternatively, to take the work or any part of it out of the hands of the contractor.

MW-1 allows the owner to serve a notice on the contractor requiring that the default be remedied. If the default is not remedied within the specified time, and the contractor is unable to show that the default cannot be remedied within that time, the owner may then serve a notice of termination, terminating the contractor's engagement under the contract. AS4000 allows the owner to serve a notice on the contractor demanding that the contractor show cause why either the contractor's engagement under the contract, or the contract itself, should not be terminated.

In both contracts, in the event of the contractor's insolvency, no prior notice or demand to show cause is required.

The contrast between these approaches is: on the one hand, notifying the contractor of one's intention to act; and, on the other hand, requiring the contractor to show cause why one should *not* act. This is largely a difference in procedural style, since the triggers for action, the desired outcomes and the consequences are very similar.

It should be noted that 'terminating the contractor's engagement under the contract' in MW-1 and 'taking the work out of the contractor's hands' in AS4000 are very similar procedures. Both involve the contractor leaving the site without removing its assets (everything at the site belonging to the contractor) from the site and the owner then completing the works using the contractor's assets. The similarities and distinctions between these procedures are examined later in this chapter under 'Consequences of termination by the owner'.

MW-1: clauses Q1–Q2

If the contractor is in default, then the owner may give the contractor a notice specifying the default and requiring it to be remedied within ten working days (*subclause Q1.1*).

If the contractor fails to remedy the default within ten working days (or longer, if agreed by the architect) or fails to show reasonable cause why this cannot be done, the owner may terminate the contractor's engagement by giving the contractor a notice of termination (*subclause Q1.2*).

The notice of termination must state that it is given under this clause and a copy must be given to the architect (*subclause Q1.3*).

If the contractor becomes insolvent, then the owner may immediately terminate the contractor's engagement by giving the contractor a notice of termination (*subclause Q2.1*).

The notice of termination must state that it is given under this clause and a copy must be given to the architect (*subclause Q2.2*).

AS4000: subclauses 39.2–39.4; 39.11

If the Contractor is in default, then the Principal may give the Contractor notice to 'show cause' (*subclause 39.2*).

The notice to show cause (*subclause 39.3*), must:

- state that it is given under clause 39
- specify the alleged substantial breach
- require the Contractor to show cause within seven days after receipt why the Principal should not either take the work, or any part of it, out of the hands of the Contractor or, alternatively, terminate the Contract
- state the place at which cause must be shown.

If the Contractor fails to show cause within seven days why the Principal should not exercise one of the rights referred to in this clause (*subclause 39.4*), then the Principal may either:

- **take the work, or any part of it, out of the hands of the Contractor; or**
- **terminate the Contract.**

If the Contractor becomes insolvent then, even though the Contractor is *not* in default, the Principal may take the work, or any part of it, out of the hands of the Contractor *without* first giving notice to show cause (*subclause 39.11*).

Termination by the contractor

The contractor may terminate either the contract (AS4000) or the contractor's employment under the contract (MW-1) if the owner becomes insolvent or commits any of the defaults described above under 'Default by the owner'.

Where the owner commits a default, suspension of work by the contractor is an intermediate stage in this process, during which the owner may be required to remedy nominated defaults. Both MW-1 and AS4000 allow the contractor to suspend the works if the owner does not remedy the nominated defaults within a specified period. After this period, if the owner still has not remedied the defaults, the contractor may terminate either the contract (AS4000) or the contractor's employment under the contract (MW-1). MW-1 allows the contractor to serve a notice of termination at any time after the specified period, while AS4000 requires the contractor to wait until after a further specified period before serving the notice.

In the event of the owner's insolvency, both MW-1 nor AS4000 allow immediate termination without prior suspension.

MW-1: clauses Q11–Q14

If the owner is in default by:

- **failing to make a progress payment on time (see Chapter 8); or**
- **failing to meet any other substantial obligation under the contract (the catch-all item)**

then the contractor may give the owner a notice specifying the default and requiring it to be remedied within ten working days. The notice must also state that, if the owner fails to remedy the default (or, presumably, although this is nowhere stated, fails to show reasonable cause why this cannot be done: see clause Q12 below) within ten working days, the contractor may elect *either* to suspend the necessary work *or* to terminate its engagement. The notice must

also state that it is given under this clause and a copy must be given to the architect (*clause Q11*). It should be noted, however, that clause Q13 *specifically* requires the contractor to suspend the work *before* terminating its engagement.

If the owner fails:

- **to remedy the default, or to show reasonable cause why this cannot be done, within ten working days after receiving the contractor's notice requiring that the default be remedied; or**
- **the architect fails to issue a certificate within five working days after receiving the contractor's notice requesting that the certificate be issued;**

then the contractor may immediately give the owner a notice suspending the necessary work (*subclause Q12.1*).

The notice of suspension must state that it is given under this clause and a copy must be given to the architect (*subclause Q12.2*).

The contractor may claim any costs incurred in the suspension of the works if the owner subsequently remedies the default (*subclause Q12.3*).

The claim must be submitted and processed in accordance with section H of the contract (*subclause Q12.4*; and see Chapter 3).

The contractor may terminate its engagement – at any time – after giving the owner the notice of suspension, by giving the owner a notice of termination (*subclause Q13.1*).

The notice of termination must state that it is given under this clause and a copy must be given to the architect (*subclause Q13.2*).

If the owner becomes insolvent, then the contractor may immediately terminate its engagement by giving the owner a notice of termination (*subclause Q14.1*).

The notice of termination must state that it is given under this clause, and a copy must be given to the architect (*subclause Q14.2*).

AS4000: subclauses 39.7–39.9; and 39.11

If the Principal is in default, then the Contractor may give the Principal notice to show cause (*subclause 39.7*).

The notice to show cause (*subclause 39.8*), must:

- **state that it is given under clause 39**
- **specify the alleged substantial breach**
- **require the Principal to show cause within seven days after receipt why the Contractor should not suspend the work or, eventually, terminate the Contract**
- **state the place at which the Principal must show cause.**

If the Principal fails to show cause within seven days why the Contractor should not exercise one of the rights referred to in this clause, then the Contractor may suspend the whole or any part of the work under the Contract.

If the Principal remedies the breach, then the Contractor must lift the suspension.

The Contractor may terminate the Contract if:

- **the Principal does not remedy the breach within 28 days of the suspension; or**
- **the breach cannot be remedied and the Principal does not take other steps acceptable to the Contractor.**

The Superintendent must assess and certify any costs incurred by the Contractor as a result of the suspension, which will then become a debt due from the Principal to the Contractor (*subclause 39.9*).

If the Principal becomes insolvent then, even though the Principal is not in default, the Contractor may terminate the Contract, without first giving notice to show cause (*subclause 39.11*).

Termination for frustration

Termination may also be effected on the grounds of 'frustration' of the contract if it becomes apparent that the project cannot proceed due to external impediment or if the parties agree that it cannot proceed.

MW-1: subclause Q19.1

The contract may be terminated if it is frustrated at law or if the parties agree that it is frustrated (*subclause Q19.1*).

AS4000: clause 40

The Contract may be terminated if it is frustrated (*clause 40*).

Consequences of termination by the owner

The differences between the consequences of termination by the owner and by the contractor relate mainly to the issue of which party's interests are being protected by the action being taken.

In the case of termination of the contractor's engagement by the owner (MW-1), or of the owner taking the work out of the contractor's hands (AS4000), the owner exercises the right to complete the project. This action does not entail release of either party from any contractual obligation other than the contractor's obligation to execute the balance of the works. The action gives the owner the right to pay all of the contractor's outstanding accounts, to take over all existing subcontracts and to use all of the contractor's property on the site. All such property reverts to the contractor upon completion of the works. The difference between the cost to the owner of completing the works and the amount that would have been payable to the contractor had it completed the works becomes a

debt payable by one party to the other, according to whichever amount is greater.

In the case of termination of the contract by the owner (AS4000), then the contract literally ceases to exist, as if it had been repudiated by the contractor, and the owner may seek under law to recover damages from the contractor.

MW-1: clauses Q3–Q10

Where the owner has terminated the engagement of the contractor for default or insolvency before the issue of the notice of practical completion (*subclause Q3.1*), the owner:

- must bear all the risk that it would have borne had the notice of practical completion been issued on the day of termination
- becomes responsible for public liability insurance and contract works insurance
- may take possession of the site and exclude the contractor from it (that is, the contractor must leave the site and may not return without the architect's instruction to do so).

The owner may take possession of any of the contractor's assets on the site, such as documents, plant, tools, materials and equipment (presumably also temporary buildings), and may use them in completing the works. (This provision envisages the use of these assets by the 'others' referred to in clause Q5, with whom the owner may contract to complete the works.) When the architect issues the certificate for the amount payable after 'completion following termination', the owner must make available for removal from the site by the contractor the contractor's remaining assets. (Materials which were to have been incorporated in the works will obviously *not* be available.) The contractor may not claim from the owner for any fair 'wear and tear' (that is, deterioration and damage through normal use) of any of the assets to be removed from the site (*subclause Q3.2*).

The architect may instruct the contractor at any time after termination to remove some or all of its assets from the site within ten working days. If the contractor does not comply, the owner may remove and sell the assets in question, and must then notify the contractor and the architect of the amount for which the assets were sold. The owner must pay this to the contractor, less the costs of removal and sale (*subclause Q3.3*).

Where the owner has terminated the engagement of the contractor for default or insolvency, the architect may instruct the contractor to assign to the owner all of its rights under any subcontract for the works (*clause Q4*). This means the owner can complete the works using the existing subcontracts (see Chapter 5).

Where the owner has terminated the engagement of the contractor for default or insolvency, the owner may contract with others to complete the works (*clause Q5*).

Where the owner has terminated the engagement of the contractor for default or insolvency, the owner need make no further payment to the contractor until and unless the architect's certificate after completion following termination shows that an amount is payable to the contractor (*clause Q6*).

Where the owner has terminated the engagement of the contractor for default or insolvency, the owner may elect to pay directly to a subcontractor or supplier any amount payable to it by the contractor. The architect must deduct this from any amount payable to the contractor when preparing its certificate after completion following termination, provided that the owner has not already paid the amount to the contractor (*clause Q7*). In other words, the amount paid to a subcontractor or supplier cannot be deducted twice from the contractor's entitlement.

Where the owner has terminated the engagement of the contractor for default or insolvency, the architect must promptly assess the cost to the owner of completing the works. This assessment must exclude the owner's direct payments to subcontractors or suppliers. The architect must then issue a copy of the assessment to the contractor and the owner. The architect must base its certificate after completion following termination upon the assessment (*clause Q8*).

Where the owner has terminated the engagement of the contractor for default or insolvency, the architect must promptly certify the amount payable, including GST, by either party to the other, and must issue the certificate to both parties. The certificate must be calculated in accordance with subclauses Q9.2 to Q9.5 (*subclause Q9.1*; see below).

The architect must determine the adjusted contract price at the date of termination (*subclause Q9.2*).

The architect must determine the total (*subclause Q9.3*) of:

- the value of building work completed, including GST, assessed in the last progress certificate
- the cost to the owner of completing the works, including GST, excluding the owner's direct payments to subcontractors and suppliers
- the owner's direct payments to subcontractors or suppliers, provided that the owner has not already paid these amounts to the contractor
- the architect's assessment of any claim for any other amount owed by the contractor to the owner
- any liquidated damages (accrued) at the date of termination, calculated since the last progress certificate.

The architect must also determine (*subclause Q9.4*) the total of:

- **the amount of security accessed (by the owner) to the date of the certificate**
- **the amount of any security by cash retention held by the owner in a designated trust account.**

The amount certified as payable by either party to the other (*subclause Q9.5*) will be:

- **the total determined in subclause 9.2**
- ***less* the total determined in subclause 9.3**
- ***plus* the total determined in subclause 9.4.**

The architect must state on the certificate the value of any remaining security by unconditional guarantee (*subclause Q9.6*) – which is still held by the owner.

The certificate issued after completion following termination replaces the final certificate (see Chapter 9) which would have been issued had normal completion of the project taken place (*subclause Q9.7*).

Either the contractor or the owner – but usually the contractor – must pay to the other party the amount certified by the architect for payment in the certificate issued after completion following termination by the owner. The owner must pay a positive balance – an unlikely outcome – to the contractor, while the contractor must pay a negative balance to the owner (*subclause Q10.1*).

The party to be paid (*subclause Q10.2*) must present to the other party for payment:

- **the certificate**
- **a tax invoice for the amount certified, if applicable.**

Note that an owner which is not engaged in any commercial activity would not be required to be registered for the GST, and would therefore neither need nor be entitled to claim an input credit, for which a tax invoice is mandatory.

The party required to make the payment (usually the contractor) must then do so within the period for payment stated in item 4, 'Period for payment of certificates or release of security', of schedule 1; or, if nothing is stated, within seven calendar days after receiving the certificate and tax invoice from the other party (*subclause Q10.3*).

AS4000: subclauses 39.4–39.6; and 39.10

If the Principal takes the work, or any part of it, out of the hands of the Contractor, the Principal may suspend payments to the Contractor unless and until the Superintendent certifies on completion of such work that an amount is payable to the Contractor (*subclause 39.4*).

The Principal must complete the work taken out of the hands of the Contractor and may, without compensating the Contractor:

- use any materials, equipment and the like (presumably including temporary buildings) intended for the work under the Contract
- take possession of and use whatever Contractor's plant and the like are required to complete the work under the Contract
- enter into contracts with whichever of the Contractor's subcontractors and consultants are required to complete the work under the Contract.

The Principal must maintain such plant and the like and return it and any surplus materials to the Contractor if a balance is due to the Contractor upon completion of the work. The Superintendent must keep records of the cost of completing the work (*subclause 39.5*).

When the work taken out of the hands of the Contractor has been completed, the Superintendent must assess the cost incurred by the Principal, and certify the difference between that amount and the amount that would otherwise have been paid to the Contractor under the Contract. If a balance is payable to the Principal, then it may retain the Contractor's plant and the like until payment is made. If payment is not made after reasonable notice, then the Principal may sell the Contractor's plant and the like to cover its costs, including the costs of sale, and must pay any excess to the Contractor (*subclause 39.6*).

If the cost is greater than the amount that would have been paid to the Contractor for completing the work, then the Contractor must pay back the difference to the Principal. In the unlikely event that the cost is less than that amount, then the Principal must pay the difference to the Contractor.

If the Principal terminates the Contract, then the rights of the parties are as they would have been under the law governing the Contract if the Contractor had repudiated the Contract (that is, refused to fulfil a fundamental obligation under the Contract) and the Principal had elected to treat the Contract as at an end and recover damages (*subclause 39.10*).

Consequences of termination by the contractor

As we saw earlier in this chapter under 'Consequences of termination by the owner', the differences between the consequences of termination by the owner and by the contractor relate mainly to the issue of which party's interests are being protected by the action being taken.

In the case of termination of the contract by the contractor for the owner's default or insolvency (AS4000), then the contract literally ceases to exist, as if it had been repudiated by the owner, and the contractor may seek under law to recover damages from the owner.

In the parallel case of termination of the contractor's engagement by the contractor (MW-1), however, the contract is *not* terminated, but the contractor is entitled to the payment that would have applied *had* the owner repudiated the contract.

MW-1: clauses N9; Q15–Q18

If the contractor suspends the necessary work for the owner's failure to make a progress payment on time, or failure to meet any other substantial obligation under the contract, and the owner later remedies the default, the contractor may then make a claim to adjust the contract for any costs it has incurred as a result of the suspension (*subclause N9.1*).

A claim to adjust the contract must be submitted and processed in accordance with section H of the contract (*subclause N9.2*; and see Chapter 3).

Where the contractor has terminated its engagement for the owner's default or insolvency, three thing must occur. Firstly, the owner must pay the contractor the amount that the owner would have been liable to pay if the owner had wrongfully repudiated the contract (*clause Q15*).

Then, the contractor must submit a claim to the architect within a reasonable time. The claim must be calculated as if the owner had wrongfully repudiated the contract (*clause Q16*).

Lastly, the architect must then promptly assess the claim and issue a certificate to both parties stating the amount to be paid to the contractor or the owner (*subclause Q17.1*).

The certificate issued following termination replaces the final certificate (see Chapter 9) which would have been issued had normal completion of the project taken place (*subclause Q17.2*).

Upon receiving a certificate issued following termination by the contractor (*subclause Q18.1*), the party to be paid (usually the contractor) must present to the other party for payment:

- **the certificate**
- **a tax invoice, if the party is registered for GST, for the amount certified.**

Note as above that an owner may not be registered for the GST.

The party required to make the payment (usually the owner) must do so within the period for payment stated in item 4, 'Period for payment', of schedule 1; or, if nothing is stated, within seven calendar days after receiving the certificate and tax invoice from the other party (*subclause Q18.2*).

AS4000: subclause 39.10

If the Contractor terminates the Contract, then the rights of the parties are as they would have been under the law governing the

Contract if the Principal had repudiated the Contract (that is, refused to fulfil a fundamental obligation under the Contract) and the Contractor had elected to treat the Contract as at an end and recover damages (*subclause 39.10*).

Consequences of termination for frustration

The consequences of termination of the contract on the grounds of 'frustration' are that the owner is required to pay the contractor for all contract work done, and to reimburse other specified related costs incurred.

MW-1: clause Q19

As we saw above under 'Termination for frustration', the contract may be terminated if it is 'frustrated at law' or if the parties agree that it is frustrated. In this event, the contractor may submit a claim (*subclause Q19.1*) for:

- **the value of works executed, less progress payments made**
- **the value of security held by the owner**
- **the non-recoverable costs incurred or committed to by the contractor arising from execution of the works**
- **the non-recoverable costs incurred or committed to by the contractor arising from ceasing execution of the necessary work**
- **loss of profit.**

The architect must promptly assess the claim and issue a certificate to both parties stating the amount to be paid. The certificate issued following termination for frustration replaces the final certificate (see Chapter 9) which would have been issued had normal completion of the project taken place (*subclause Q19.2*).

The party to be paid (usually the contractor, since payment is always in arrears) must present to the other party for payment:

- **the certificate**
- **a tax invoice, if the party is registered for GST, for the amount certified.**

(Note again that an owner may not be registered for the GST.) The party required to make the payment must do so within the period for payment stated in item 4, 'Period for payment', of schedule 1; or, if nothing is stated, within seven calendar days after receiving the certificate and tax invoice from the other party (*subclause Q19.3*).

AS4000: clause 40

In the event of the Contract being terminated for frustration, the Superintendent must issue a progress certificate calculated as if the

Contract had not been frustrated and a progress claim had been both due and made on the date of frustration. The Principal must pay the Contractor:

- all unpaid certificates
- the cost of materials reasonably ordered, which will become the property of the owner upon payment
- the reasonable cost of removing temporary works and plant
- the reasonable cost of returning employees to their place of recruitment
- costs incurred in expectation of completing the work under the Contract.

Each party must release and return all security provided by the other (*clause 40*).

DISPUTES

A building and construction project involves many specialised activities, organised in complex relationships. It involves, firstly, the translation of ideas or concepts into drawings and specifications, and, secondly, the further translation of these documents into physically realised structures.

'Disputes' are disagreements between the owner and the contractor over a variety of matters that may arise during a building and construction contract. Such disagreements may relate to the facts of a particular situation, to an interpretation of the contract documents, or to the respective rights of the parties. There is also much scope for dissent by either party – usually the contractor, but occasionally the owner – from actions by the contract administrator, whether instructions given in the role of owner's agent or rulings made and certificates issued in the role of assessor, valuer and certifier.

Consequently, there is a need for a clearly defined process for resolving disputes with the least possible disruption of the project. This process is discussed later in this chapter under 'Settlement of disputes'.

Time bars for notification of claims and disputes

Time bars serve two main purposes: they discourage retrospective 'catch-up' claims, such as may occur when a contractor realises towards the end of a project that the overall profit margin will be less than it had anticipated; and they ensure that monetary claims, claims for extension of time, and disputes over the contract administrator's rulings will be dealt with within a relatively short time frame, while the memories of project personnel are still fresh and all personnel with a knowledge of the events are still associated with the project.

MW-1 applies a single time bar to the submission of all claims to adjust the contract and disputes over the contract administrator's rulings.

AS4000 distinguishes between 'routine claims' – such as progress claims and claims for variations and extension of time – and 'non-routine claims'- such as claims for delay damages and any other claim which would otherwise have been included in the final payment claim. It applies a time bar to the submission of claims for extension of time, but not to other routine claims; requires that non-routine claims be made by a 'prescribed notice' (see Chapter 3); and applies a different time bar to this latter category of claim.

MW-1: subclauses A8.1; H1.1; H1.3; and J4.1

The contractor must give the architect notice of its intention to dispute a certificate, notice, written decision or written assessment issued by the architect, or the architect's failure to issue such a document, within 20 working days after receiving the document or becoming aware of the architect's failure to issue the document (*subclause A8.1*).

As we saw in Chapter 3, the contractor must submit to the architect a detailed claim resulting from an urgent instruction within an agreed time; or, if no time is agreed, within 20 working days after receiving the instruction, or, if none has been given, after the event that has resulted in the claim (*subclause H1.1*).

The contractor must give a detailed claim resulting from an urgent instruction, suspension of the works or a delay in the progress of the works to the architect within 20 working days after receiving the urgent instruction or the end of the suspension or the delay (*subclause H1.3*).

The contractor must submit to the architect a detailed claim resulting from the discovery of dangerous or contaminated material within an agreed time; or, if no time is agreed, within 20 working days after completion of the necessary work (*subclause H1.4*).

If the architect instructs the contractor to proceed with a variation, the contractor must submit a detailed claim to adjust the contract within 20 working days after completing the work (*subclause J4.1*).

AS4000: subclause 34.3; clause 41

The Contractor must give the Superintendent a claim for an extension of time, showing the cause and extent of the delay, within 28 days of when the Contractor should have reasonably become aware of the cause (*subclause 34.3*).

As we saw in Chapter 3, a prescribed notice may be given by either party to the other party and to the Superintendent. It must be given as soon as a party becomes aware of its right to make a claim or, alternatively, the party may give the other party a notice of dispute (see below 'Settlement of disputes'). A prescribed notice

must set out as fully as possible the circumstance on which the claim is based, the contractual basis for the claim and the amount of the claim. A prescribed notice need not be given for any claim which must be notified under another clause of the contract (that is, any routine claim such as a progress claim or a claim for extension of time).

The Contractor must give a prescribed notice to the Principal and the Superintendent for any claim for delay damages (see Chapter 7) and for any claim which would otherwise have been included in the final payment claim (*subclause 41.1*) – although it is unclear to what categories of claim this condition applies.

A party may claim damages for breach of contract if the other party does not submit a claim by a prescribed notice when it is required to do so. This does not bar or invalidate the original claim (*subclause 41.2*).

For example, if the Contractor presented a late claim for an extension of time, the Principal would have grounds to claim damages caused by the loss of opportunity, due to the late notification, to take remedial action. However, the Superintendent would still be required to assess the claim for extension of time, and the contractor would still be entitled to an extension of time and associated costs if applicable. Note that the grounds for damages are the *timing*, not the form of the claim. Note also that the other party's claim is likewise required to be made by a prescribed notice.

Where a party has given a prescribed notice, it may notify the other party and the Superintendent of fuller details of its claim within 28 days. Otherwise, the prescribed notice will be deemed to be the claim. The Superintendent must assess the claim and notify the parties of its decision within 56 days of receiving the prescribed notice. A party wishing to dispute the Superintendent's decision must give a notice of dispute within 28 days of receiving the decision. If a notice of dispute is not given, the Superintendent must certify the amount of the assessment, which will then become a debt due to the party which gave the prescribed notice from the other party (*subclause 41.3*).

Settlement of disputes

Private negotiation is an important first step in the process of settlement of 'disputes', or differences between the parties (all referred to here as disputes). Each party is required to be represented at a private conference by a person who has authority to settle the dispute. If the parties cannot resolve a dispute by negotiation then, depending on the contract, they may be required to resolve the dispute by mediation, expert determination, arbitration or litigation.

During the dispute resolution process, both parties must continue with the work and fulfil their obligations under the contract. Both parties may also institute any legal proceedings to enforce payment of amounts previously certified by the contract administrator or to seek court injunctions to enforce or prohibit actions by each other.

MW-1 requires at least one compulsory conference to take place as a precondition for any further and more formal attempt to resolve a dispute. If the dispute cannot be resolved at a conference, then either party may refer the dispute to any one of the three forms of 'alternative dispute resolution' (ADR) envisaged by the contract: mediation, expert determination and arbitration. ADR must be conducted in accordance with the provisions of the contract.

If the parties cannot agree on the form of ADR to use, then either party may commence legal proceedings to resolve the dispute. If the parties have agreed to mediation of the dispute and mediation fails, then either party may commence legal proceedings to resolve the dispute. If the parties have agreed to expert determination or arbitration, then the expert's decision or the arbitrator's award is conclusive and cannot be challenged on factual or technical grounds. However, if either party disputes the expert's decision or the arbitrator's award on legal grounds, then that party may commence legal proceedings to rectify any alleged legal error by the expert or arbitrator. This, of course, is a separate issue from that of resolving the dispute.

AS4000 also requires one or more private conferences to take place as a precondition for any further and formal attempt to resolve a dispute. If the dispute cannot be resolved at a conference, then it is automatically referred to arbitration. Any arbitrator must be appointed and any arbitration must be conducted in accordance with the provisions of the contract. While this contract excludes the possibility of resolving the dispute *itself* at law, in common with MW-1 it does not exclude the possibility of seeking to overturn or otherwise change an arbitrator's award on the grounds of legal error.

MW-1: clauses P1–P7; A8–A10

In the event of a dispute, each party must continue to fulfil its obligations under the contract (*clause P1*).

Either party may serve on the other a dispute notice under the contract. The notice requires the representatives of the parties to meet within five working days of the notice being served, and make a genuine attempt to settle the dispute. If no settlement is reached within this period, the parties must meet within ten working days after the notice is served and make a genuine attempt to settle the dispute (*subclause P2.1*).

Receipt within this period of a proposal to proceed to alternative dispute resolution under clause P3 below does not affect the time frame for the compulsory conference (*subclause P2.2*).

If the dispute remains unsettled ten working days after the dispute notice is served, then the parties may agree to resolve the dispute by one of the methods of alternative dispute resolution available under the contract (*subclause P3.1*).

Under subclause P3.2, alternative dispute resolution is available only if:

- **one of the parties proposes in writing one or more methods within 15 working days after the dispute notice is served**
- **the parties agree in writing on one method within 20 working days after the dispute notice is served**
- **the parties commence the procedure of the agreed method within 25 working days after the dispute notice is served.**

If, within the time frame stated above, no proposal for alternative dispute resolution is received, or the parties do not agree on a method, or the parties do not commence the procedure of the agreed method, then either party may begin legal proceedings (*subclause P3.3*).

If the parties have agreed to submit a dispute to mediation, then within 25 working days after the dispute notice is served, the parties must agree in writing on the identity of the mediator. If they cannot agree, then the party that issued the notice must request in writing that the chairperson of the Chapter of the Institute of Arbitrators & Mediators Australia in the state or territory in which the site is located nominate the mediator. A copy of this request must be given to the other party (*subclause P4.1*).

Mediation must be conducted according to the Rules for Mediation of the Institute of Arbitrators & Mediators Australia, unless the parties agree in writing to other rules within five working days after agreement or nomination of the mediator (*subclause P4.2*).

Mediation must commence within ten working days after agreement or appointment of the mediator (that is, within 35 working days after the dispute notice is served), unless the parties agree in writing to a longer period (*subclause P4.3*). Note that this subclause refers to 'agreement or *appointment*', whereas subclause P4.2 above refers to 'agreement or *nomination*'.

If mediation fails, then either party may begin legal proceedings (*subclause P4.4*).

If the parties have agreed to submit a dispute to expert determination, then within 25 working days after the dispute notice is served, the parties must agree in writing on the identity of the expert. If they can not agree, then the party that issued the notice

must request in writing that the chairperson of the Chapter of the Institute of Arbitrators & Mediators Australia in the state or territory in which the site is located nominate the expert. A copy of this request must be given to the other party (*subclause P5.1*).

The expert must not act as an arbitrator, and must agree to issue a written decision within ten working days of being appointed (that is, within 35 working days after the dispute notice is served), unless the parties agree in writing to a longer period (*subclause P5.2*).

Expert determination must be conducted according to the Rules for Expert Determination of Commercial Disputes of the Institute of Arbitrators & Mediators Australia (*subclause P5.3*).

The decision of the expert cannot be reviewed under the contract (that is, it is final and binding). If either party disputes the decision, it may begin legal proceedings (*subclause P5.4*) – but only to rectify any alleged error of law by the expert.

Note that New South Wales, Victoria and Queensland do not permit expert determination for housing projects.

If the parties have agreed to submit a dispute to arbitration, then within 25 working days after the dispute notice is served, the parties must agree in writing on the identity of the arbitrator. If they can not agree, then the party that issued the notice must request in writing that the chairperson of the Chapter of the Institute of Arbitrators & Mediators Australia in the state or territory in which the site is located nominate the arbitrator. A copy of this request must be given to the other party (*subclause P6.1*).

Unlike mediation, there is no time frame set for commencement of arbitration and, unlike expert determination, none for its completion.

Arbitration must be conducted according to the Rules for the Conduct of Commercial Arbitrations of the Institute of Arbitrators & Mediators Australia (*subclause P6.2*).

The decision of the arbitrator cannot be reviewed under the contract (that is, it is final and binding). If either party disputes the decision, it may begin legal proceedings (*subclause P6.3*) – but only to rectify any alleged error of law by the arbitrator.

Note again that New South Wales, Victoria and Queensland do not permit arbitration for housing projects.

No action taken by way of dispute resolution prevents either party from seeking to enforce payment due under a certificate or to obtain a court injunction against action by the other party (*clause P7*).

The contractor must give the architect notice (that is, a dispute notice) of its wish to dispute a certificate, notice, written decision or written assessment issued by the architect, or the architect's failure to issue such a document (*subclause A8.1*), within 20 working days after:

- receiving the document; or
- becoming aware of the architect's failure to issue the document.

The contractor cannot dispute either the document or the architect's failure to issue the document without having given the architect a dispute notice within the period stated above (*subclause A8.2*). Late claims are, therefore, time barred.

The architect must assess any dispute notice given as above and must give a written decision to both parties within ten working days (*subclause A8.3*). Note that clause A9 below nevertheless appears to rule out the application of any penalty for failure to comply with this.

The architect's failure to issue a certificate, notice, written decision or written assessment as required by the contract in response to a claim does *not* cause the claim to be deemed accepted (*clause A9*).

Compensation under the contract, where payable and paid, is a 'sole and complete remedy' for the party receiving the payment (*clause A10*). This means the party compensated can not seek further compensation at law.

AS4000: clause 42

Either party may serve on the other party, and give to the Superintendent, a notice adequately identifying and detailing a matter in dispute.

A dispute may concern either a Superintendent's direction or a claim under the law of the state or territory in which the site is located, such as a claim:

- in tort
- under statute
- for restitution based on unjust enrichment
- for 'rectification' (meaning interpretation of the Contract by a court to give effect to the parties' intentions); or
- for frustration.

'Unjust enrichment' means obtaining a benefit from another party:

- without consideration (or quid pro quo)
- by taking advantage of a mistake by the other party
- by applying duress to the other party
- if the other party is acting under compulsion
- illegally.

Both parties must continue to fulfil their obligations under the contract, providing neither party becomes insolvent and the contract is not frustrated (*subclause 42.1*).

The parties must confer at least once within 14 days after service of the notice of dispute to attempt to resolve the dispute, and, if

necessary, to explore other means of resolution. Each party must be represented by a person with authority to settle the dispute, or agree to other means of resolution. All discussions and negotiations at such conferences are 'privileged' (they may not be disclosed to others).

A dispute which is not resolved within 28 days of service of the notice is automatically referred to arbitration (*subclause 42.2*).

The parties must agree upon an arbitrator within a further 14 days (that is, within a maximum of 42 days of the service of the notice of dispute).

If the parties can not agree, then the arbitrator must be nominated by the person stated in item 32(a), 'Arbitration – Person to nominate an arbitrator', of annexure part A; or, if no-one is stated, the president of the Australasian Dispute Centre.

Arbitration must be conducted according to the rules stated in item 32(b), 'Arbitration – Rules for arbitration', of annexure part A; or, if nothing is stated, rules 5 to 18 of the Rules of the Institute of Arbitrators, Australia for the Conduct of Commercial Arbitrations.

Where no rules for arbitration are stated and the parties are based in different countries, then the United Nations Commission on International Trade Law (UNCITRAL) Arbitration Rules will apply. In such a case, the appointing authority will be the person stated in item 32(c), 'Arbitration – Appointing Authority under UNCITRAL Arbitration Rules', of annexure part A; or, if no-one is stated, the president of the Australasian Dispute Centre (*subclause 42.3*).

The service of a notice of dispute and the process of dispute resolution do not affect the right of a party to seek in court to enforce payment of amounts certified by the Superintendent. Likewise, they do not affect the right of a party to seek in court either an urgent injunction to enforce or restrain an action by the other party or an urgent declaration of the first party's rights (*subclause 42.4*).

REVIEW

This chapter describes the things that can and sometimes do go wrong contractually, not constructionally, in building and construction contracts. It also examines the provisions of such contracts for dealing with these problems.

A default is, quite simply, a major breach of the contract. It may be an act of commission or omission by either party. Default by either party, if it is sufficiently serious, is grounds for the other party to terminate either the employment of the contractor under the contract, or the contract itself, particularly if the other party believes that payment of damages would not be an adequate remedy for the default. Insolvency of either party is also grounds for termination by

the other party. In some instances, either party may initiate termination on the grounds of frustration of the contract.

The consequences of termination vary according to the identity of the initiating party. Essentially, the provisions of the contract are designed to protect the interests of the initiating party, usually at the expense of the defaulting or insolvent party.

Disputes are differences between the parties as to factual matters, the meaning of the contract documents, the validity of the contract administrator's directions to the contractor in the role of owner's representative and of its rulings in the role of assessor, valuer or certifier. Disputes may be settled by private negotiation, mediation, expert determination, arbitration or litigation. Contracts may provide for private negotiation to be a mandatory step prior to initiating other, more formal, methods of settling a dispute. A mediator, expert or arbitrator may be someone agreed by the disputing parties, or nominated by a specified person or body.

Contracts may also provide for a time bar on the submission of monetary claims, claims for extension of time and disputes over the contract administrator's rulings.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- section A, 'Overview' (clauses A1, A4 and A8 to A10)
- section H, 'Claims to adjust the contract' (clause H1)
- section J, 'Variation to the works' (clause J4)
- section N, 'Payment for the works' (clause N9)
- section P, 'Dispute resolution' (whole section)
- section Q, 'Termination of engagement' (whole section)
- section S, 'Definitions'
- schedule 1, 'Contract information'.

AS4000 – 1997 *General conditions of contract*:

- clause 34, 'Time and progress' (subclause 34.3)
- clause 39, 'Default or insolvency' (whole clause)
- clause 40, 'Termination by frustration' (whole clause)
- clause 41, 'Notification of claims' (whole clause)
- clause 42, 'Dispute resolution' (whole clause)
- annexure part A

Aqua Group, Hackett, M and Robinson, R (2003), *Pre-Contract Practice and Contract Administration for the Building Team*, Blackwell Science, Oxford:

- **chapter 16, 'Delays and disputes'**
- **chapter 18, 'Insolvency'.**

De Rome, N (1991), 'Commercial arbitration and the surveyor', *The Building Economist*, vol 29, no 4, pp 4–8.

Ramus, J and Birchall, S (1996), *Contract Practice for Surveyors*, 3rd Edition, Laxton's (Butterworth-Heinemann), Oxford:

- **chapter 11, 'Claims'**
- **chapter 21, 'Dispute resolution'.**

REVIEW QUESTIONS

4.1 Explain the terms 'default' and 'breach', both in a general sense and in the specific context of a building and construction project. Illustrate your explanation with a broad outline of the acts or omissions that might constitute default or breach by:

(a) **the owner**
(b) **the contractor.**

4.2 Explain the term 'termination'. How may termination of a building and construction contract, or of the contractor's engagement under the contract, be initiated; by whom; and in what circumstances?

4.3 What are the different consequences of termination when it is initiated by:

(a) **the owner**
(b) **the contractor?**

4.4 Describe the circumstances in which termination may be initiated when the other party is not in default.

4.5 What kinds of issue could become disputes in the context of a building or construction project? Explain how such disputes are settled by:

(a) **mediation**
(b) **expert determination**
(c) **arbitration**
(d) **litigation.**

4.6 Describe the major consequences of termination of the contract on the grounds of frustration.

4.7 Explain the purpose and workings of time bars. Explain also the circumstances in which they are used.

PART 3

CHANGES IN PROJECT PARAMETERS

CHAPTER 5

SUBCONTRACTS

OVERVIEW

Subcontracts have been an integral part of the building and construction industry in one form or another since the Middle Ages. The master stonemasons and carpenters who built the great cathedrals of Europe were essentially 'labour only' subcontractors to the architect who was, in turn, not only the designer but also the head contractor, or perhaps the construction manager, in a schedule of rates contract.

In Australia, subcontracts have assumed an ever-increasing importance since the 1950s. Many long-established family building and construction firms began to incorporate, in a quest for the capital they needed to finance their expansion and plant acquisition so as to be able to meet the demands of changing technology. These firms frequently maintained a full stable of specialist 'own trades' – teams of skilled workers on the firm's payroll, which worked exclusively for the firm within the confines of a single trade.

With corporate goals and strategies becoming more clearly defined, it soon became obvious to the new building and construction companies that 'own trades' were not an economical proposition, since these specialist teams, or at the very least their skeleton crews, had to be paid whether there was work for them or not. The outcome of this was the progressive closing down and outsourcing of many of the specialised own trades, and an increasing reliance on subcontractors which could be engaged as and when required. Naturally, subcontractors were more expensive to use than own trades, but they were only paid while their services were actually being used. This logic was also applied to the companies' own construction plant, which was also outsourced, but often retained under the contractor's corporate umbrella in the guise of a wholly owned plant hire company.

By the late 1960s, major contractors – and not a few smaller ones – were beginning to operate as managers of unrelated trade contractors. They were generally referred to in a project as the 'head'

contractor, this being the company which had a direct contract – the 'head', or principal, contract – with the owner. They employed mainly management personnel and a few on-site labourers to carry out odd jobs, such as cleaning, which remained a head contractor's responsibility.

Today, while the majority of subcontractors are very small, the biggest, particularly in the area of mechanical and electrical services, are far bigger than most head contractors.

This chapter is about subcontracts, their role in the building and construction industry and the way in which they are administered. It also examines the contract administration procedures applicable to the adjustment of the contract sum and the payment to the contractor for changes in the value of work for which provisional sums have been allowed in the contract.

It presents the reader with a comprehensive view of the nature and role of different types of subcontract and their administration and answers the following questions:

- Why are subcontracts used in the building and construction industry?
- What restrictions are there on the work in a project that may be subcontracted?
- What responsibility does the contractor have for the subcontracted work?
- What are the different types of subcontract which may be entered into by a contractor and under what circumstances?
- What restrictions are there on the terms and conditions of a subcontract?
- In what circumstances may a subcontract be terminated?
- When are provisional and prime cost sums used; what is their purpose; and how are they adjusted?
- What are provisional quantities; and how are they used?

SUBCONTRACTS

A subcontract is a *sub*ordinate *contract*, within the context of a specific head (or main) contract, entered into by the head (or main) contractor and a third party (the subcontractor) which will either execute work or supply labour and materials or goods.

Subcontracts may be either 'domestic' or 'nominated'. A domestic subcontractor is engaged by the head contractor entirely at its own discretion to carry out the work. The selection of a nominated subcontractor, on the other hand, is reserved to the contract administrator or the owner. In the latter case, the subcontractor is named ('nominated') in the contract documents and a provisional sum is included in the contract sum to cover the anticipated cost of the work. The nominated subcontractor must be engaged by the head contractor under a nominated subcontract.

Suppliers may also be either 'domestic' or 'nominated'. A domestic supplier may be engaged by the head contractor entirely at its own discretion to supply materials or goods. Alternatively, a supplier may be named, but *no* provisional sum is stated in the contract documents. As is the case with nominated subcontractors, the selection of a nominated supplier is reserved to the contract administrator or the owner. In this case too, the supplier is named in the contract documents and a provisional sum is included in the contract sum to cover the anticipated cost of the materials or goods. The nominated supplier must be engaged by the head contractor under a nominated supply agreement or a nominated subcontract.

In some instances, where a final decision has not yet been taken as to the identity of a nominated subcontractor or supplier, a provisional sum may be included in the contract, but *without* naming a nominated subcontractor or supplier, and a nomination is made at a later date, either during the tender evaluation period or, even later, during the construction phase.

A variation on this theme is selected subcontracts (AS4000), discussed below.

Neither MW-1 nor AS4000 makes any provision for nominated subcontractors or suppliers.

The commercial basis

In an industry that is largely founded upon specialist subcontractors, it would not be at all unexpected for an individual contractor to subcontract much of its work. Far from being a reflection on the expertise of contractors, it is a result of the interconnection of two economic realities in the building and construction industry: heightened technology, leading to greater specialisation in the workforce; and increased competition, leading to reliance on specialist subcontractors as a cheaper alternative to every contractor maintaining a specialist workforce for every trade or technical speciality.

A further incentive for contractors to use subcontractors is the contractual arrangement whereby payment is made to subcontractors periodically, in arrears, *after* the contractor has received payment from the owner for work done during the *previous* period. If, as is frequently the case, the bulk of the work under the contract is done by subcontractors, then the financial outcome for the contractor is twofold. First, payment by the contractor for work done is delayed – since directly employed labour is paid weekly while subcontractors are usually paid monthly – so that payment for work done may be made as much as a month later, greatly improving the contractor's cashflow. Second, a correspondingly high proportion of the burden of financing the project during each period is shifted from the

contractor to the subcontractors. The overall effect of this arrangement is a concomitant reduction in the magnitude of the working capital needed by the contractor, thus opening up the industry to smaller contractors than would otherwise be the case.

Thus the principal reasons for a contractor using a subcontractor are:

- greater expertise on the part of a specialist subcontractor
- reduction by the head contractor of the fixed overheads incurred in maintaining a permanent specialised workforce
- improvement in productivity due to both the above
- financial advantages from improved cashflow and the effective part-financing of the bulk of a project by the subcontractors.

The contractual basis

The contractor may subcontract any part of the works, but not the works as a whole.

AS4000, however, allows the contract administrator to control the subcontracting of any work which is listed in the appendix as work which cannot be subcontracted without approval. This is an administrative device that allows the owner and its advisers to control the identity of the firms which will carry out and/or supply the work, to control the quality of key materials or goods, and to select key shelf items at their convenience. It also allows the contract administrator to direct some of the terms of the subcontract for this work.

MW-1: clause G4

The contractor has full discretion to subcontract any part of the works, but not the works as a whole (*subclause G4.1*).

AS4000: subclause 9.2

The Contractor has full discretion to subcontract any part of the work, with the exception of specific work stated in item 17, 'Subcontract work requiring approval', of annexure part A. The Contractor must obtain the Superintendent's approval:

- to subcontract such work or to allow an approved subcontractor to subcontract it further; or
- for any subcontractor to assign a subcontract or any other related right, benefit or interest.

The Contractor must include with every request for approval (under this clause) full details of the work and the subcontractor, the subcontract documents, and any other information reasonably requested by the Superintendent.

The Superintendent must notify the Contractor of approval, or of the reasons for denial, within 14 days of the request (*subclause 9.2*). The Superintendent may direct that the proposed subcontract include provisions that:

- **prohibit the subcontractor from assigning or further subcontracting the subcontract without the Contractor's consent**
- **require the subcontractor to act in such a way as to enable the Contractor to fulfil its obligations to the Principal.**

The contractor's responsibility for subcontracts

Regardless of the assignment of specific work to subcontractors, the contractor retains full responsibility for the execution of the works, for any liability or obligation under the contract, and for the acts and omissions of all subcontractors, both domestic and nominated.

MW-1: clause G4

As we saw above, the contractor has full discretion to subcontract any part of the works, but not the works as a whole. The contractor remains liable for the work done by its subcontractors (*subclause G4.1*).

The contractor must take responsibility for any acts or omissions of its suppliers and subcontractors (*subclause G4.2*).

The contractor must include the relevant provisions of the head contract in any contract with its suppliers and subcontractors and must inform them (presumably in its invitation to tender) of the contractor's relevant obligations under the head contract (*subclause G4.3*). This ensures that subcontractors are aware of their responsibility to act in such a way as to enable the contractor to fulfil its obligations to the owner.

AS4000: subclauses 9.2 and 9.5

As we saw above, the Superintendent may direct that the proposed subcontract include provisions that require the subcontractor carrying out that work stated in item 17, 'Subcontract work requiring approval', of annexure part A to act in such a way as to enable the Contractor to fulfil its obligations to the Principal (*subclause 9.2*).

The Contractor must accept responsibility for the actions and omissions of *all* subcontractors, and those responsible to subcontractors, as if they were those of the Contractor, unless otherwise stated in the Contract.

Approval of a subcontractor – by the Superintendent – does not absolve the Contractor of this responsibility (*subclause 9.5*).

Domestic subcontractors and suppliers

'Domestic subcontractor' and 'domestic supplier' are not contractual terms. They are widely used in the building and construction industry, and are used in this text for convenience.

Domestic subcontractors, that is, those engaged directly by the head contractor at its own discretion, are contractually for all intents and purposes a *de facto* temporary extension of the contractor's own labour force. That is to say, they are accorded no independent existence by the contract. The contract administrator addresses the work of these subcontractors and pays for their work through the head contractor, who is totally responsible for their activities.

Similarly, domestic suppliers are engaged by the head contractor entirely at its own discretion to supply materials or goods. They too are accorded no independent existence by the contract.

Alternatively, a supplier may be named in the contract, but without a provisional sum being stated. Such a supplier does not thereby necessarily acquire the status of a nominated supplier, despite having been named, since the inclusion in the contract of a provisional sum for the anticipated cost of the materials or goods is generally a prerequisite for that status.

The right of the owner to request from the contractor a statement of payments made to workers and domestic subcontractors and, in some cases, to pay such workers and subcontractors directly is dealt with in Chapters 8 and 9.

Forms of subcontract and supply agreement

Since subcontractors and suppliers carry out part of the contractor's work for the owner, they should also be required to shoulder part of the contractor's responsibilities to the owner. The conditions of subcontracts and supply agreements should therefore be compatible with the conditions of the head contract, so that subcontractors and suppliers undertake the same obligations and liabilities to the contractor that the contractor undertakes to the owner. The conditions which should be mirrored in this way include, among others: indemnity against loss resulting from the subcontractor's actions, omissions and negligence; and security and retention moneys.

Neither MW-1 nor AS4000 contains an explicit provision regarding the form, as distinct from the content, of a subcontract or supply agreement. MW-1 requires a subcontract to mirror the relevant provisions of the contract, so that the subcontractor is obliged to act in such a way as to enable the contractor to fulfil its obligations to the owner. AS4000 imposes the same requirement, but only in respect of work which is listed in the appendix as work that may not be subcontracted without approval.

A commonly used standard form of subcontract is *Sub-Contract Document SC6*, which is an omnibus subcontract, designed for use in conjunction with any of the standard building or construction contracts.

There is also a number of fully expressed and complete standard forms of subcontract agreement, each consistent with and specifically designed for use in conjunction with a particular head contract form. Some of these are:

- ***Australian Standard Contract AS2545*** – for use with AS2124
- ***Australian Standard Contract AS4901*** – for use with AS4000
- ***Sub-Contract Agreement SC-NPWC3*** – for use with NPWC3.

The contractor is, of course, under no obligation to use *any* of these and may use any form of subcontract that fulfils the requirements of the head contract. Indeed, many major contractors have their own in-house standard subcontract form, tailored to suit their own requirements.

There is no standard form of subcontract specifically designed for use with MW-1.

MW-1: subclause G4.3

As we saw above, the contractor must include the relevant provisions of the head contract in any contract with its suppliers and subcontractors and must inform them (presumably in its invitation to tender) of the contractor's relevant obligations under the head contract (*subclause G4.3*). This provision ensures that subcontractors are aware of their responsibility to act in such a way as to enable the contractor to fulfil its obligations to the owner.

AS4000: subclause 9.2

As we saw above, the Superintendent may direct (*subclause 9.2*) that a proposed subcontract for work stated in item 17, 'Subcontract work requiring approval', of annexure part A, include provisions that:

- **prohibit the subcontractor from assigning or (further) subcontracting (any part of) the subcontract without the Contractor's consent**
- **require the subcontractor to act in such a way as to enable the Contractor to fulfil its obligations to the Principal.**

Nominated subcontractors and suppliers

'Nominated' subcontractors and suppliers – that is, those identified by the contract administrator or the owner in the contract documents and later engaged by the contractor – are accorded a special status under the contract. A provisional sum is included in the

contract sum to cover the anticipated cost of each nominated subcontract or supply agreement.

The procedure of nominating subcontractors and suppliers is followed to help the contract administrator achieve the project objectives of quality, time and cost. Where highly specialised work is involved, it is often advisable to ensure that this work is supplied and/or carried out by an experienced, technically competent firm with adequate management skills and a record of timely completion.

Similarly, where the timely supply of key materials or goods is dependent upon the timing of manufacturers' production runs, it is often highly advisable to ensure that the desired items are available when required. It may also be important for reasons of uniformity to obtain the whole of the order from a single production run, or, for administrative convenience, it may be desired to defer the selection of certain key shelf items.

In all such cases, the nomination of subcontractors and suppliers is an administrative device which allows the owner and its advisers to control the identity of the firms which will carry out the work and supply materials or goods, and thus to control the quality of workmanship and key materials or goods and to select key shelf items at their convenience.

Nominated subcontractors and suppliers have a special status under the head contract which is not accorded to domestic subcontractors and suppliers. Their work is valued separately, and the value is identified as such in claims and payments. (Protection of payments to nominated subcontractors and suppliers is discussed in detail in Chapter 8 and Chapter 9.) Furthermore, the head contractor is obliged to provide evidence that payment for the identified value of work has been made to the respective nominated subcontracts and suppliers.

Some contracts, notably AS2124, make no distinction between nominated subcontractors and nominated suppliers, referring to both as nominated subcontractors. Neither MW-1 nor AS4000 makes any provision for either of these categories.

Provisional and prior contractors

Where early commencement of specialist design or fabrication work is critical to the timely completion of the works, the contract administrator may arrange for the owner to enter into a provisional or prior contract with a specialist firm *before* entering into the head contract. The owner may then assign or transfer this contract as a subcontract to the subsequently appointed head contractor. This process is sometimes referred to as 'novation', the inference being that it creates a new contract.

Some contracts, notably the JCC series, require a provisional contract to be listed in the appendix, and a provisional sum to be included in the contract sum to cover the value of the provisional contract. Then, if the contractor is satisfied that the terms of the provisional contract conform with the head contract, the provisional contract would automatically become a nominated subcontract or supply agreement upon the signing of the head contract. This arrangement presupposes the previous execution of the provisional contract, but not necessarily the performance of any work.

Other contracts, notably AS2124, require a prior contractor to be named in the head contract, and a copy of the prior contract (or of the deed of novation as the case may be) to be included in the tender documents. The head contractor is then required to enter into a nominated subcontract with the prior contractor, or execute a deed of novation of a prior contract and give the owner credit for all payments already made by the owner to the prior contractor. This arrangement presupposes both the previous execution of the prior contract and the performance of work.

Neither MW-1 nor AS4000 makes any provision for provisional or prior contracts. However, AS4000 strongly implies the possibility of prior contracts by allowing for the novation of subcontractors' work.

AS4000: subclause 9.4

The Principal may novate to the Contractor the particular part of the work under the Contract which is to be executed by any subcontractor (including a selected subcontractor) under a (prior) contract with the Principal. To initially foreshadow and eventually implement this intention:

- **the subcontractor's name must be stated in item 18, 'Novation', of annexure part A, together with a description of its particular part of the work under the Contract**
- **a model deed of novation must have been included in the invitation to tender.**

The Principal may then direct the Contractor to execute free of charge a deed of novation in the form of the model between the Principal, the Contractor and the subcontractor (*subclause 9.4*).

Selected subcontractors

'Selected' subcontractors are those identified in the tender by the contractor from a list provided by the contract administrator or the owner in the tender documents. As is the case with nomination of subcontractors and suppliers, this is an administrative device that allows the owner and its advisers to control the identity of the firms which will carry out and/or supply the work, to control the

quality of key materials or goods, and to select key shelf items at their convenience.

But here the resemblance ends. No provisional sum is included in the contract sum to cover the anticipated cost of selected subcontracts. Once engaged by the contractor, selected subcontractors are accorded no special status under the contract unless such a status is explicit in the terms and conditions of the subcontract, which are required to be specified in the tender documents. Otherwise, in the absence of terms and conditions to the contrary, their work is not valued separately, nor is its value identified as such in claims and payments, and the head contractor is not obliged to provide evidence that payment for the identified value of work has been made to the respective subcontractors. In other words, *unless otherwise specified*, they are treated in all respects as domestic subcontractors.

AS4000 does not distinguish between selected subcontractors and suppliers; while MW-1 has no provision at all for either.

AS4000: subclause 9.3

A selected subcontractor is one whose name the Principal has included in the invitation to tender, in a list of one or more approved potential subcontractors for particular subcontract work. The Contractor must select one of these as the subcontractor for that work, and notify the Superintendent accordingly. Where no listed subcontractor will consent to carry out the particular work, the Contractor must prepare a list of proposed subcontractors for the Superintendent's approval (*subclause 9.3*) and, presumably, selection.

Sub-subcontractors and sub-suppliers

In view of the magnitude of some major projects and the consequent magnitude of some of the related subcontracts, the question arises whether a subcontractor or supplier may further subcontract (sub-subcontract) a portion of its work. This would appear to be a logical step, particularly in the case of large mechanical services subcontracts, for example, which usually have an electrical component. In such a case, it makes quite as much practical sense for the subcontractor to further subcontract the electrical work as it did for the head contractor to subcontract the mechanical work in the first instance.

Neither MW-1 nor AS4000 makes any provision for sub-subcontractors or sub-suppliers.

Nomination of subcontractors and suppliers

While the contract administrator may nominate subcontractors or suppliers, this right is not unrestricted. It may not be exercised over the contractor's reasonable objection to a particular subcontractor or

supplier, nor to impose on the contractor a subcontractor who refuses to be bound by the nominated subcontract provisions of the head contract. Some contracts however, notably AS2124, provide that, if the contract administrator instructs the contractor to engage the recalcitrant subcontractor, then the contractor will not be liable for any consequences of the subcontractor's refusal to be bound by these provisions.

Neither MW-1 nor AS4000 makes any provision for nominated subcontractors or suppliers. Consequently, neither contract contains any requirement as to their nomination.

Contract administrator's instructions to subcontractors

As we saw under 'Nominated subcontractors and suppliers', nominated subcontractors are identified by the contract administrator or the owner in the contract documents, and from then on are accorded a special status under the contract. The question arises therefore, in view of their status, of whether the contract administrator may give instructions to them directly.

Some contracts, notably NPWC3, expressly require the contract administrator to give all instructions regarding *nominated* subcontract works to the contractor. Neither these nor other contracts contain any explicit provision regarding contract administrator's instructions relating to the work of domestic subcontractors. A prudent contract administrator would, in any case, be well advised to communicate with *any* subcontractor indirectly, through the contractor.

Neither MW-1 nor AS4000 makes any provision for nominated subcontractors, nor does either contain any requirement as to the contract administrator's instructions to *any* subcontractor.

Payment of nominated subcontractors

Arising out of the special status accorded to nominated subcontractors, special provisions may apply which govern payment to them by the contractor.

The contractor may be required to show in any progress claim the amount included for each nominated subcontractor (see Chapter 8) and to provide evidence to the contract administrator that this amount has actually been paid to the subcontractor. If not, the owner may make the next payment directly to the subcontractor and deduct the amount so paid from the next payment to the contractor.

Alternatively, the owner may be required to pay, in any progress payment to the contractor, the net amount payable to each nominated subcontractor plus the contractor's percentage for profit and attendance as stated in the contract (see Chapter 8).

In some instances, the owner may be required to make *all* payments directly to nominated subcontractors on behalf of the contractor.

As noted under 'Nominated subcontractors and suppliers', protection of payments to nominated subcontractors and suppliers is discussed in detail in Chapters 8 and 9.

Neither MW-1 nor AS4000 makes any provision for nominated subcontractors. Consequently, neither contract contains any requirement as to their payment.

Termination of subcontracts

The main grounds for termination of a subcontract are repudiation of the subcontract (that is, refusal to fulfil a fundamental obligation under the subcontract) by either the subcontractor or the contractor, and bankruptcy of the subcontractor. Where a nominated subcontract is terminated, the contract administrator may be required to nominate a replacement nominated subcontractor to complete the work.

Neither MW-1 nor AS4000 makes any provision for nominated subcontracts. Consequently, neither contract contains any requirement as to their termination.

Contractor's work and services in connection with subcontracts

The contractor, because of its control of the site and the fact that it has access to a wider range of trade and other skills than the nominated subcontractor, is often required to carry out minor works in connection with a nominated subcontract, which may be defined and included in the contract in a number of forms.

Specified work All known construction work in connection with the nominated subcontract is fully documented in the drawings and the specification. The work is described and accurately measured in the bill of quantities.

Provisional quantities All anticipated construction work in connection with the nominated subcontract is provisionally documented in the drawings and the specification. The work is described and provisional quantities are included in the bill of quantities.

Provisional sum The cost of all anticipated construction work in connection with the nominated subcontract is estimated and a provisional sum is included in the contract. The contractor carries out the work, the value is agreed and the contract sum or the total amount payable to the contractor is adjusted accordingly.

Nominated subcontractor to do the work The nominated subcontractor is made responsible for the building and construction work. It must either independently engage building labour to carry

out the work, or request the contractor to do so, usually on a negotiated 'do and charge' basis. While, in some instances, these charges may actually be paid by the subcontractor to the contractor, it is more common for the contractor to back-charge these amounts to the subcontractor and then deduct them from progress payments.

Neither MW-1 nor AS4000 makes any provision for nominated subcontracts. Consequently, neither contract contains any requirement as to contractor's work in connection with these.

However, irrespective of the above, it is good practice for the main contract to require the contractor to:

- **allow a subcontractor the reasonable use of any scaffolding in place**
- **provide a subcontractor with all reasonable hoisting and cranage**
- **provide a subcontractor with all site services, such as water and electricity, to a reasonable number of points**
- **provide a subcontractor with storage facilities for its materials, tools and so on.**

In some cases – for instance specialised scaffolding or storage facilities – it may be simpler for the subcontractor to supply these.

PROVISIONAL SUMS

Provisional sums and prime cost sums (referred to in this section simply as 'provisional sums') are approximate sums of money which are included in a contract to cover the anticipated cost in cases where the exact nature or extent of part of the work is not known at the time of tendering. These are not guessed, 'blue sky' amounts, but are derived by the contract administrator on the basis of either historical data, or an estimate by a specialist consultant or subcontractor, of the reasonable amount for which the defined work could be carried out, including all likely contingencies.

Provisional sums may be a necessary precondition for the employment of nominated subcontractors and suppliers. Where the provisional sum is established before the full scope of the nominated subcontract work is known, the amount for which the nominated subcontract is let will undoubtedly vary from the estimate upon which the provisional sum was based. Where, on the other hand, the provisional sum is established *after* the full scope of the nominated subcontract work has been determined, the variance should be considerably smaller – although it is by no means eliminated. In both instances, the difference between the subcontract sum and the provisional sum is required to be added to or deducted from the contract sum or the total amount payable to the contractor.

Neither MW-1 nor AS4000 makes any provision for nominated subcontracts. Consequently, any provisional sums allowed under either contract are for work to be performed, or items to be supplied or supplied and delivered, either by the head contractor or by a domestic subcontractor.

Adjustment of provisional sums is discussed in detail below.

MW-1: clauses K1–K3

Schedule 6, 'Provisional sums', and schedule 7, 'Prime cost sums', both show allowances which have been included in the contract (*subclause K1.1*), for:

- **performance of particular work including the supply of materials needed for the work**
- **supply or supply and installation of an item; or**
- **payment of a fee or charge to an authority.**

Note that the three categories and their respective treatment under this clause are somewhat blurred. The first option refers to 'work', for which subclause K1.2 requires a 'provisional sum' to be allowed. The second refers to 'an item', for which subclause K1.3 requires a 'prime cost sum' to be allowed. The third refers to 'a fee or charge', and we must go to clause K5 below before we can draw the inference that a 'provisional sum' is to be allowed for this.

A provisional sum is included in the contract as an allowance for foreseeable work which has not been fully defined by the architect at the date of the contract (*subclause K1.2*).

A prime cost sum is included in the contract as an allowance for a foreseeable retailed item which has not been selected by the architect at the date of the contract (*subclause K1.3*).

The contractor must not perform any work for which a provisional sum has been allowed, nor purchase any item for which a prime cost sum has been allowed, unless so instructed by the architect. However, the contractor may make payment of a fee or charge to an authority without a prior instruction (*subclause K1.4*).

The contractor must agree that all work under provisional sums can be performed, and all items under prime cost sums can be supplied or supplied and installed, within the contract period, provided that the work and the items were reasonably described at the date of the contract (*subclause K1.5*).

The architect may instruct the contractor to provide a quotation for the performance of work, the supply or supply and installation of an item, or the payment of a fee or charge, for which a provisional sum or a prime cost sum has been allowed (*subclause K2.1*).

The quotation must be for the net cost to the contractor, including GST but excluding overheads and profit (*subclause K2.2*).

Where the architect agrees with the quotation, the architect may instruct the contractor to proceed with the works in question. The architect must then adjust the contract price accordingly when the next progress certificate is issued (*subclause K2.3*).

Where the architect does not agree with the quotation, the architect may instruct the contractor to proceed with the works in question. The architect must then promptly assess the quotation and issue to the contractor and the owner its decision as to adjustment of the contract price (*subclause K2.4*; and see 'Adjustment of provisional sums' below).

If the architect instructs the contractor that another person is to perform the work, or supply or supply and install an item, for which a provisional sum or a prime cost sum has been allowed, that person will become a subcontractor – unless the contractor objects to the person on reasonable grounds or the person refuses to become a subcontractor on terms acceptable to the contractor. If that person does not become a subcontractor for either of the above reasons, the person will become a separate contractor and the provisional sum or prime cost sum must be deducted from the contract price (*clause K3*; and see later under 'Separate contractors'.)

AS4000: clause 1

Provisional sums are defined as including monetary sums, contingency sums or prime cost sums (*clause 1*).

Reasons for using provisional sums

It is quite true that in a perfectly documented project, the accepted lump sum tender would also be the final contract sum or the total amount payable to the contractor. In a very well documented project – which is all one really dares hope for – the main source of variability would be latent conditions and adjustment of provisional sums (including prime cost sums).

The general reason for using provisional sums in a project is to include in the contract sum the estimated cost of work, the scope of which is not fully defined at the time of tendering. More specific reasons are:

Nominated or selected subcontractors to give the contract administrator control over the choice of firm to carry out specialised work.

Nominated or selected suppliers to facilitate the selection at an appropriate and convenient time of materials, goods or components manufactured by a particular firm.

Work to be done by the contractor or domestic subcontractors to offset the cost of such work, the full scope of which cannot be foreseen before construction begins.

Payments to statutory authorities to cover liabilities, fees or charges which the contractor may have to meet, but which are not precisely ascertainable beforehand.

Neither MW-1 nor AS4000 makes any provision for nominated subcontracts or supply agreements. Consequently, neither contract contains any requirement as to the allowance of provisional sums in connection with these.

Adjustment of provisional sums

As we saw above, the principal reason for using provisional sums (including prime cost sums) in a project is to include in the contract sum the estimated cost of work, the scope of which is not fully defined at the time of tendering.

Since provisional sums are by their very nature variable, there needs to be a mechanism for adjusting the contract sum, or the total amount payable to the contractor, for any difference between the provisional sum, which is included in the contract sum, and the eventual subcontract sum which will be included in the final payment to the contractor.

It should be noted that the contractor is responsible for the works and is consequently responsible for all overheads, attendance and profit applicable to the administration and supervision of subcontracts and supply agreements. Thus the contract sum is deemed to contain an allowance, included in the lump sum price by the contractor when tendering, of an amount or percentage for such costs and profits. Where a bill of quantities is provided, the individual allowances are usually shown immediately following each provisional sum and are fixed amounts, the percentage that each represents of the related provisional sum sometimes varying according to the nature of the work. The allowances are payable to the contractor progressively and *pro rata* as the work proceeds.

AS4000 explicitly requires a fixed percentage for profit and attendance, which is stated in the appendix, to be applied to *all* provisional sums. MW-1 is silent on this issue, apart from implicitly acknowledging that the contract sum includes such allowances by requiring a fixed percentage which is likewise stated in the appendix, to be applied to the amount by which the price of work for which a provisional sum has been included in the contract *exceeds* the provisional sum.

A contract may require the contract sum to be adjusted either

progressively or on completion of the project. In the latter case, adjustment might be made in aggregate – either for nominated subcontractors alone or for nominated subcontractors and suppliers taken together. The adjustment would consist of the difference between the respective aggregate of the amounts allowed and the aggregate of the 'as let' amounts, to which would be applied a predetermined percentage stated in the appendix.

MW-1 requires the contract sum to be adjusted by the difference between each provisional sum and the cost of the work, plus (where the price is greater than the provisional sum) a predetermined percentage stated in the appendix. This adjustment is made when the next progress certificate is issued, and the amount so calculated is payable to the subcontractor after the additional work has been carried out.

AS4000 does not require the contract sum to be adjusted for such differences, but requires the single predetermined percentage for profit and attendance, referred to above and applicable to all subcontracts, to be applied progressively to *all* amounts as and when they become payable to a subcontractor.

MW-1: clauses K4 and K5

The architect must adjust the contract price by the difference between the provisional sum or prime cost sum allowed and the agreed price; or the cost of performing the work, or of supplying, or of supplying and installing an item (*subclause K4.1*).

Where the cost of performance is greater than the provisional sum, the difference, together with the percentage stated in item 16 of schedule 1 must be added to the contract price (*subclause K4.2*).

Where the cost of performance is less than the provisional sum, the difference must be deducted from the contract price (*subclause K4.3*).

The architect must adjust the contract price accordingly when the next progress certificate is issued (*subclause K4.4*).

The architect must adjust the contract price by the difference between the provisional sum allowed – for payment of a fee or charge to an authority – and the fee or charge paid by the contractor (*clause K5*).

Example 5.1 shows cost data relating to a provisional sum that might confront an architect during a project administered under MW-1. The architect is required to calculate the adjustment to the contract price for the difference between the provisional sum allowed and the cost of performance of the work, where that cost is *greater* than the provisional sum.

EXAMPLE 5.1
PROVISIONAL SUM DATA: INCREASE IN COST OF WORK (MW-1)

Provisional sum	$100 000
Cost of performance of the work	$110 000
Item 16, schedule 1: percentage of the difference to be added to the contract price	10%

Example 5.2 shows a proposed procedure for calculating the adjustment to the contract price for the difference between the provisional sum allowed and the cost of performance of the work, the cost data and relevant contractual details of which are shown in Example 5.1.

EXAMPLE 5.2
CALCULATION OF ADJUSTMENT OF PROVISIONAL SUM: INCREASE IN COST OF WORK (MW-1)

	$
Cost of performance of the work	110 000
Less Provisional sum	−100 000
Difference	10 000
Add Item 16, schedule 1: percentage of the difference to be added to the contract price (10%)	1 000
Adjustment to the contract price	+11 000

Example 5.3 also shows cost data relating to a provisional sum that might confront an architect during a project administered under MW-1. The architect is required to calculate the adjustment to the contract price for the difference between the provisional sum allowed and the cost of performance of the work, where that cost is *less* than the provisional sum.

EXAMPLE 5.3
PROVISIONAL SUM DATA: REDUCTION IN COST OF WORK (MW-1)

Provisional sum	$100 000
Cost of performance of the work	$90 000

Example 5.4 shows a proposed procedure for calculating the adjustment to the contract price for the difference between the provisional sum allowed and the cost of performance of the work, the cost data and relevant contractual details of which are shown in Example 5.3.

EXAMPLE 5.4
CALCULATION OF ADJUSTMENT OF PROVISIONAL SUM: REDUCTION IN COST OF WORK (MW-1)

	$
Cost of performance of the work	90 000
Less Provisional sum	−100 000
Adjustment to contract price	−10 000

AS4000: clause 3

Provisional sums are not themselves payable by the Principal, but payment for each parcel of work for which an individual provisional sum has been allowed must be made.

Where the work is carried out or supplied by the Contractor, it must be priced by the Superintendent, and the difference between the price and the provisional sum added to or deducted from the contract sum. (The Contractor is then paid the price for the work.)

Where the work is carried out or supplied by a subcontractor, the Superintendent must pay the Contractor the amount payable to the subcontractor (in accordance with the subcontract), disregarding any damages (see Chapter 7) and any discount for prompt payment, plus the percentage stated in item 12, 'Provisional sum, percentage for profit and attendance', of annexure part A; or, if nothing is stated, an amount assessed by the Superintendent (*clause 3*).

Note that there is no reference here to a difference to be added to or deducted from the contract sum. Since the identical percentage is applicable to all subcontractors carrying out work under a provisional sum, the simplest and most practical way of dealing with this issue is to group *all* relevant subcontract work when preparing a progress claim or certificate, and then apply the percentage to the *total* value of subcontract work being claimed or certified.

Example 5.5 shows cost data relating to a provisional sum that might confront a Superintendent during a project administered under AS4000. The Superintendent is required to calculate the adjustment to the contract sum for the difference between the provisional sum allowed and the price for the work, where the work is carried out by the Contractor, and the price is *greater* than the provisional sum.

EXAMPLE 5.5
PROVISIONAL SUM DATA: INCREASE IN PRICE FOR WORK BY CONTRACTOR (AS4000)

Provisional sum	$100 000
Price for the work	$110 000

Example 5.6 shows a proposed procedure for calculating the adjustment to the contract sum for the difference between the provisional sum allowed and the price for the work, the cost data and relevant contractual details of which are shown in Example 5.5.

EXAMPLE 5.6
CALCULATION OF ADJUSTMENT TO PROVISIONAL SUM: INCREASE IN PRICE FOR WORK BY CONTRACTOR (AS4000)

	$
Price for the work	110 000
Less Provisional sum	−100 000
Difference to be added to the contract sum	+10 000

Example 5.7 shows cost data relating to a provisional sum that might confront a Superintendent during a project administered under AS4000. The Superintendent is required to calculate the adjustment to the contract sum for the difference between the provisional sum allowed and the price for the work, where the work is carried out by the Contractor and the price is *less* than the provisional sum.

EXAMPLE 5.7
PROVISIONAL SUM DATA: REDUCTION IN PRICE FOR WORK BY CONTRACTOR (AS4000)

Provisional sum	$100 000
Price for the work	$90 000

Example 5.8 shows a proposed procedure for calculating the adjustment to the contract sum for the difference between the provisional sum allowed and the price for the work, the cost data of which is shown in Example 5.7.

EXAMPLE 5.8
CALCULATION OF ADJUSTMENT TO PROVISIONAL SUM: REDUCTION IN PRICE FOR WORK BY CONTRACTOR (AS4000)

	$
Price for the work	90 000
Less Provisional sum	−100 000
Difference to be deducted from the contract sum	−10 000

No proposed procedure is shown for calculating the adjustment to the contract sum for the difference between the provisional sum allowed and the price for the work, where the work is carried out by a subcontractor. This is, quite simply, because no such adjustment is required. As noted above, the simplest and most practical way of dealing with this issue is as part of a progress claim or certificate.

Discrepancies in provisional sums

Occasionally, due to an oversight or a clerical error, a discrepancy may be found in the amount of a provisional sum where this sum is stated in two or more of the contract documents. A contract may formally favour the bill of quantities over all other documents in such a situation, in the sense that it is the provisional sum as shown in the bill of quantities that is included in the contract sum and used when adjusting the contract sum for the 'as let' amount of a subcontract. However, both MW-1 and AS4000 require the contract administrator to resolve such discrepancies. The outcome, naturally, is partly dependent also upon the contractual status of the bills of quantities (see Chapter 1).

MW-1: clauses B1 and B3

As we saw in Chapter 1, both parties must promptly notify the architect of any discrepancy in the contract documents. The architect must then promptly give the contractor an instruction resolving any discrepancy, with a copy to the owner (*clause B1*).

The contractor may then recover any cost it incurs as a result of an architect's instruction which has been given to resolve a discrepancy between the contract documents, if the discrepancy is resolved other than in accordance with the order of precedence of documents (*subclause B3.1*).

The contractor may treat any such architect's instruction as an instruction for a variation (*subclause B3.2*).

AS4000: subclause 8.1

As we saw in Chapter 1, any inconsistency, ambiguity or discrepancy in the contract documents must be notified to the Superintendent by the party which discovers it. The Superintendent must direct the Contractor as to the interpretation of the documents which must be adopted. If the Superintendent's direction causes the Contractor to incur more or less cost, then the Superintendent must assess the difference in cost, which must then be added to or deducted from the contract sum (*subclause 8.1*).

SEPARATE CONTRACTS

In some instances, a project may include work of an artistic or special nature which is not usually carried out by a building and construction contractor or subcontractor. This work could be temporarily deferred and then carried out by a separate contractor under another contract which commences only after completion of the project by the head contractor. Such a procedure, however, would tend to delay the total completion of the project by the full duration of the second contract. A suitable alternative to consecutive contracts is entering into a separate contract which is to be completed *concurrently* with the head contract.

A separate contractor is required not to interfere in any way with the head contractor's work, and the head contractor is, in turn, required to facilitate the separate contractor's work and co-ordinate it with the work of the project.

MW-1 also requires a firm to become a separate contractor where the firm has been selected by the contract administrator to perform subcontract work for which a provisional sum has been allowed, but either the contractor objects to the firm or the firm refuses to become a subcontractor.

AS4000 makes no provision for separate contracts as such, but requires the contractor to permit the execution of work on the site by persons engaged by the owner.

MW-1: clauses G14–16; K3

The owner may engage one or more separate contractors to carry out the works shown in item 13, 'Separate work by separate contractors', of schedule 1 (*subclause G14.1*).

The owner must ensure that any separate contractor works safely, avoids unnecessary interference with the contractor's work and co-ordinates its work with the contractor's work (*subclause G14.2*).

The contractor must promptly provide the architect with all relevant site information necessary for a potential separate contractor to plan and price its proposed work (*subclause G15.1*).

The contractor must co-operate with any separate contractor (*subclause G15.2*).

The contractor may claim any cost it incurs as a result of any act or omission by a separate contractor which a competent contractor could not have foreseen, with specific reference to unsafe work practices, unnecessary interference with the contractor's work and failure to co-ordinate its work with the contractor's work (*subclause G16.1*).

The claim must be submitted and processed in accordance with section H of the contract (*subclause G16.2*; and see Chapter 3).

As we saw above under 'Provisional sums', the architect may instruct the contractor that another person is to perform the work, or supply or supply and install an item for which a provisional sum or a prime cost sum has been allowed (*subclause K3.1*).

The architect may only so instruct the contractor if the particular person is identified in schedule 6, 'Provisional sums', or schedule 7, 'Prime cost sums'; or if the intention to use a particular – but as yet unidentified – person is indicated in either schedule (*subclause K3.2*).

That person will become a subcontractor (*subclause K3.3*) unless:

- **the contractor objects to the person on reasonable grounds; or**
- **the person refuses to become a subcontractor on terms acceptable to the contractor.**

If that person does not become a subcontractor for either of the above reasons, then the person will become a separate contractor. The owner must ensure that the separate contractor works safely, avoids unnecessary interference with the contractor's work and co-ordinates its work with the contractor's work. The contractor must promptly provide the architect with all relevant site information necessary for the separate contractor to plan and price its proposed work, and must co-operate with it. The contractor may claim any cost it incurs as a result of any act or omission by the separate contractor which a competent contractor could not have foreseen, with specific reference to unsafe work practices, unnecessary interference with the contractor's work and failure to co-ordinate its work with the contractor's work. Lastly, the provisional sum or prime cost sum must be deducted from the contract price (*subclause K3.4*).

AS4000: subclause 24.2

As we saw in Chapter 1, under clause 24, the Contractor must permit the execution of work on the Site by persons engaged by the Principal (such as separate contractors), co-operate with them, and co-ordinate its work with theirs. The Principal must ensure that such persons do not impede the Contractor's work (*subclause 24.2*).

PROVISIONAL QUANTITIES

Provisional quantities are approximate quantities of work to be included in a contract where the exact quantity of part of the work is not known at the time of tendering: for example, excavation in rock. These quantities may appear either in a bill of quantities or a schedule of rates.

Neither MW-1 nor AS4000 makes any provision for dealing with the valuation of provisional quantities. However, if a provisional quantity were included in the bill of quantities, the contractor would be required to enter a reasonable rate against the item in the priced bill of quantities, which would then be used in the valuation of variations (see Chapter 6) and progress claims (see Chapter 8).

REVIEW

This chapter describes subcontracts, their role in the building and construction industry, and the way in which they are administered.

A subcontract is a contract between a head (or main) contractor in a project and a subcontractor. The owner enters into a head (or main) contract with the head contractor for the completion of all the work of the project. The head contractor then enters into subcontracts (*sub*ordinate *contracts*) with a number of individual subcontractors, each of which is expert in a specific area of building and construction work, for the completion of a discrete portion of the work of the project. These subcontractors are effectively part of the head contractor's workforce.

When some discrete part of the works cannot be fully defined as to its extent or specification, the contract may include a provisional sum to cover the estimated cost of the work to be done or the materials or goods to be supplied either by the contractor or by a domestic subcontractor. The contract sum is then adjusted, in keeping with the adjustments made throughout the contract, for the difference between the final price for the work or materials and the provisional sum.

When the owner, or the contract administrator on the owner's behalf, wishes to expedite the pre-planning and design of subcontract work, or to ensure the availability of materials or goods for the project, it may enter into a prior or provisional contract with a specialist contractor or supplier before entering into the head contract. Such contractors and suppliers may later be assigned or novated to the head contractor as subcontractors.

When the owner, or the contract administrator on the owner's behalf, wishes to exercise control over the identity of specialist contractors or suppliers, it may name them in the contract documents as nominated or selected subcontractors or suppliers.

Nominated subcontractors or suppliers may have a special status under the contract, which distinguishes them from domestic subcontractors and suppliers (those selected by the head contractor at its own discretion), and their contracts are administered by the contract administrator. Domestic subcontractors and suppliers, on the other hand, are viewed under the contract as a *de facto* extension of the

head contractor's own labour force. Selected subcontractors have no special status under the contract, other than any that they *may* be accorded in a *particular* contract by explicit provisions in the subcontract and the tender documents, in the absence of which they would be treated by default as domestic subcontractors.

The appointment of nominated subcontractors or suppliers also involves inclusion in the contract of provisional sums to cover the estimated cost of the work to be done and the materials or goods to be supplied. The contract sum is adjusted for any difference between the cost of the work or item and the allowance in the progress certificate following the determination of the cost.

Separate contractors may be engaged for work not usually done by the contractor. When the owner wishes the contractor to subcontract a firm that either will not agree to this status or to which the contractor has a reasonable objection, such a firm may also become a separate contractor.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- section B, 'Documents' (clauses B1 and B3)
- section G, 'Building the works' (clauses G4 and G14 to G16)
- section K, 'Adjustment of provisional and prime cost sums' (whole section)
- schedule 1, 'Contract information'
- schedule 6, 'Provisional sums'
- schedule 7, 'Prime cost sums'.

AS4000 – 1997 *General conditions of contract*:

- clause 1, 'Interpretation and construction of contract'
- clause 3, 'Provisional Sums' (whole clause)
- clause 8, 'Contract documents' (subclause 8.1)
- clause 9, 'Assignment and subcontracting' (subclauses 9.2 to 9.5)
- clause 24, 'Site' (subclause 24.2)
- annexure part A.

Aqua Group, Hackett, M and Robinson, R (2003), *Pre-Contract Practice and Contract Administration for the Building Team*, Blackwell Science, Oxford:

- chapter 8, 'Nominated sub-contractors and nominated suppliers'.

Ramus, J and Birchall, S (1996), *Contract Practice for Surveyors*, 3rd edn, Laxton's (Butterworth-Heinemann), Oxford:

- chapter 7, 'Prime cost and provisional sums'.

REVIEW QUESTIONS

5.1 Explain the reasons for the widespread use of subcontractors in the building and construction industry and what their status is under the contract.

5.2 How much of the work of a building or construction project may be subcontracted under the head contracts studied? Who is responsible for the performance of the subcontract work, and to what extent?

5.3 Describe the main types of subordinate contract in a building or construction project, how they differ, and the status of each of these types under the head contracts studied.

5.4 Explain the reasons for using nominated subcontractors and nominated suppliers, and the ramifications of this throughout the duration of the project.

5.5 How might a contract administrator under the head contracts studied proceed so as to ensure that the design of specialist services and components and/or the manufacture of such components with a long lead time can commence before a head contract is entered into?

5.6 Describe what work or services a subcontractor may reasonably expect the head contractor to carry out or provide in connection with its subcontract. Explain also how the subcontractor would pay the head contractor for this work.

5.6 Why and under what circumstances are provisional and prime cost sums used? Cite the two major reasons for their use. Explain also how changes to the value of the related work are dealt with under the head contracts studied.

5.7 Explain the circumstances under which a separate contractor is appointed and the difference between this contractor's contractual status and that of a subcontractor.

5.8 Explain how to calculate the final adjustment to the contract sum for a provisional or prime cost sum under the contracts studied.

CHAPTER 6

VARIATIONS

OVERVIEW

Variations in building and construction projects have been with us for as long as there have been such projects.

In an ideal world, there would be full and considered briefing of design consultants, conscientious feedback to and from owners, complete and accurate tender and contract documentation, accurate tender estimates, competent construction management, and clear, timely communication between the parties involved. Likewise, there would be no collusive tendering, no unbalanced pricing of bills of quantities, no false or inflated claims, and no valuation of claims according to the owner's budget or program rather than according to their merits.

Sadly, the world in which we live is far from ideal, and we find from experience that occasionally things do go wrong in projects: documentation is inadequate, inaccurate and late; communication is neither frank nor open and is often late; the tendering process is abused; definitive instructions are not forthcoming; construction is inefficient; and claimsmanship abounds.

The result of all this litany of sorrows is, in a word, variations. These are changes to project scope, quality, time and cost, which were unforeseen at the outset, and which must be dealt with as and when they arise.

This chapter is about variations, their role in the building and construction industry and the way in which they are administered. It presents the reader with a comprehensive view of the nature of different types of variation and their administration, and answers the following questions:

- What constitutes a variation?
- How do variations arise?
- Who can initiate variations, in what circumstances and under what constraints?

- What procedure must be followed in valuing a variation:
  - by agreement?
  - at bill of quantities rates?
  - as daywork?
- How is an error in a bill of quantities corrected?
- How is an error in a schedule of rates corrected?

VARIATIONS

Variations are changes in the scope, quality, time and cost of a project. They usually occur either as a result of changes to the design initiated by the contract administrator, which may flow from changes in the owner's expressed requirement, or as a result of the discovery of errors and inconsistencies in the contract documentation, or inconsistencies between the documentation and the requirements of statutory authorities.

Variations may be grouped into six categories:

1. changes in scope – such as adding or omitting an entire building, wing or storey; increasing or reducing the depth of foundations
2. changes in the character or quality of any material or work – such as changing a brick wall to concrete; changing the floor finish from vinyl tiles to carpet
3. changes in levels, lines, positions or dimensions – such as changing the height of the floor above ground level; changing the alignment of a road or a drain
4. execution of additional work – such as addition of a door or window; addition of an inspection chamber on a line of drain
5. demolition or removal of material or work no longer required by the owner (AS4000 only) – such as demolition of a footing for a plant item which is no longer required following changes in the process design
6. 'deemed variations', that is, variations that do not require a contract administrator's instruction (AS4000 only) – such as a latent condition.

As we saw in Chapter 1, AS4000 defines 'the works under the contract' as '"the works", including "temporary works"'. So we see that AS4000 specifically *includes* temporary works as falling within the ambit of variations.

MW-1: subclause J1.4

Variations are defined (*subclause J1.4*) as changes in:

- the scope of the works (see 'Conditions for variations' below for the limitations on the contract administrator's power to order variations)
- dimensions or levels of the works
- the materials, workmanship or quality of any part of the works
- details of the works; or
- the order of precedence of the contract documents.

AS4000: subclause 36.1

Variations are defined (*subclause 36.1*) as:

- increases or decreases in or omissions from the work under the Contract
- changes in the character or quality of any material or work
- changes in the levels, lines, positions or dimensions of any part of the work under the Contract
- execution of additional work
- demolition or removal of material or work no longer required by the Principal.

As we saw in Chapter 1, a 'latent condition' produces a 'deemed variation' (*subclause 25.3*), which does not require a Superintendent's direction.

Causes of variations

Variations are generated when:

- the contract administrator varies the design
- a discrepancy between contract documents is discovered
- a discrepancy between statutory requirements and contract documents is discovered
- the owner requests a change to the design
- an error in the bill of quantities is discovered; or
- an unexpected and unforeseeable event occurs.

Research carried out at the University of South Australia in the 1990s by Choy and Sidwell analysed over 6000 variations ordered by the respective contract administrator in more than 30 projects across four states of Australia. The researchers found that, by number, some 60 per cent of these variations were due to design, 12 per cent to documentation and a further 16 per cent to owner requests for changes during the construction phase. Bill of quantities errors accounted for 4 per cent, and all other causes for the remaining 8 per cent. Other research carried out both in Australia and in Britain, while differing numerically, tends to bear out the central tendency of these findings.

Conditions for variations

Only the contract administrator can authorise variations, which must be in writing. However, the contract administrator cannot compel the contractor to undertake a variation which is beyond the envisaged scope or scale of the contract. That is to say, a contractor constructing a power station cannot be compelled to construct a submarine; likewise, a contractor constructing a single lock-up shop cannot be compelled to construct a shopping mall. Nor can the

contractor be compelled to execute a variation ordered after practical completion.

As we saw in Chapter 3, MW-1 allows urgent instructions to be given orally and then confirmed in writing. In all instances, whether urgent or not, MW-1 requires the contract sum and the date for practical completion to be adjusted accordingly where applicable. Where such adjustment is to be made, the contractor is required to obtain a further instruction before proceeding with the work.

AS4000 requires the contract administrator to advise the contractor of a proposed variation, and the contractor to advise the contract administrator of the anticipated effect on project time and cost. AS4000 also allows the contract administrator to direct a variation for the contractor's convenience, on the proviso that it involves no extension of time and is at no cost to the owner.

MW-1: clauses J1–J8

The architect may give the contractor an instruction, including an urgent instruction, to perform a variation at any time up to the date of practical completion (*subclause J1.1*).

The instruction for a variation (*subclause J1.2*), may require the contractor to provide one or more of:

- **an estimate of the cost of the variation, or of any part**
- **an estimate of the effect of the variation on the date for practical completion**
- **a quotation for the cost of the variation, or of any part.**

The contractor may request the architect to issue such an instruction if it believes that the instruction is required (*subclause J1.3*). This ensures that the contractor will be reimbursed for performing additional work or the like.

In normal circumstances, the contractor must review the instruction, and, if entitled to make a claim, must not carry out the variation without a further instruction to proceed (*subclause J1.5*).

In urgent circumstances, the architect may issue an urgent instruction for a variation, whereupon the contractor must immediately comply with the instruction and may make a claim for the variation (*subclause J1.6*).

If the contractor receives an official notice or order from an authorised person which requires a variation, the architect must give the contractor an urgent instruction and the contractor may then make a claim for the variation (*subclause J1.7*).

If the contractor receives a written direction, official notice or order from an authorised person in relation to dangerous or contaminated material discovered on the site which requires a variation, the contractor must proceed in accordance with clause J8 below (*subclause J1.8*).

The contractor must review any instruction by the architect to perform a variation (*subclause J2.1*).

If carrying out the instruction *will not* cause either an adjustment to the contract price or an adjustment of time, then the contractor must carry out the instruction promptly, without obtaining a further instruction to proceed, and will *not* be entitled to an adjustment to the contract (*subclause J2.2*) – that is a variation or an adjustment of time.

If carrying out the instruction *will* cause either an adjustment to the contract price or an adjustment of time, or both, then unless the architect has requested an estimate or a quotation, the contractor must so notify the architect within 20 working days (*subclause J2.3*).

If carrying out the instruction *will* cause either an adjustment to the contract price or an adjustment of time, or both, the contractor may claim either adjustment only if it has previously notified the architect of the prospective adjustment to the contract, and the architect has then issued an instruction to proceed (*subclause J2.4*).

The architect must instruct the contractor within five working days of receiving notification (*subclause J3.1*), that carrying out the instruction *will* cause either an adjustment to the contract price, or an adjustment of time, or both:

- whether or not to proceed with the variation; or
- to provide an estimate of the cost of the variation, or of any part; or an estimate of the effect of the variation on the date for practical completion; or a quotation for the cost of the variation, or of any part.

Within 15 working days after receiving all requested or further information, the architect must instruct the contractor whether or not to proceed with the variation (*subclause J3.2*).

Any quotation submitted by the contractor is rejected unless its acceptance is confirmed in the instruction to proceed (*subclause J3.3*). In other words, the architect may instruct the contractor to proceed at a cost to be assessed later by the architect on the basis of the contractor's detailed records of the cost of carrying out the work.

If the architect instructs the contractor to proceed with a variation (*subclause J4.1*), the contractor must:

- promptly proceed with the variation
- maintain detailed records of the cost of carrying out that part of the variation for which a quotation has *not* been accepted and the effect, if any, on the date for practical completion
- notify the architect when the work has been completed
- submit a detailed claim to adjust the contract within 20 working days after completing the work, including details of any accepted quotation for any part of the work.

If the instruction to proceed includes acceptance of a quotation, the contract price will be adjusted accordingly (*subclause J4.2*).

The claim must be submitted and processed in accordance with section H of the contract (*subclause J4.3*; and see Chapter 3).

Within 24 hours of receiving from an authorised person an official notice or order which requires a variation, the contractor must notify the architect, provide a copy of the official notice or order, and request an instruction for a variation (*subclause J5.1*).

An 'authorised person' is defined as a building inspector or certifier, or other person authorised under relevant legislation having jurisdiction over the works (*subclause J5.2*).

If the official notice or order is in relation to dangerous or contaminated material discovered on the site, the contractor must proceed in accordance with clause F8 (*subclause J5.3*; see Chapter 3).

The architect must promptly issue an instruction for a variation to the contractor regarding the official notice or order (*clause J6*).

The contractor may make a claim for a variation for any costs incurred as a result of complying with the architect's instruction regarding the official notice or order *only* if the circumstances leading up to the notice were beyond the contractor's control (*subclause J7.1*).

The claim must be submitted and processed in accordance with section H of the contract (*subclause J7.2*; and see Chapter 3).

If an authorised person gives the contractor a written direction, official notice or order in relation to dangerous or contaminated material discovered on the site which requires a variation, the contractor must immediately notify the architect and comply with the direction, notice or order (*subclause J8.1*).

The contractor may make a claim to adjust the contract (*subclause J8.1*), *only* if the discovery which caused the relevant authority to take action was beyond the contractor's control and the contractor:

- promptly notifies the architect of its intention to do so
- maintains detailed records of the cost of carrying out the work and the effect, if any, of the variation on the date for practical completion
- notifies the architect when the work is complete; and
- submits a detailed claim to adjust the contract within 20 working days after completing the necessary work.

The claim must be submitted and processed in accordance with section H of the contract (*subclause J8.3*; and see Chapter 3).

AS4000: subclauses 36.1 – 36.3

The Contractor must not vary the work under the Contract except as directed by the Superintendent.

The Superintendent may only direct variations before the date of

practical completion (see Chapter 9), and these must be of a character and extent contemplated by, and capable of being carried out under, the provisions of the Contract (*subclause 36.1*).

The Superintendent may notify the Contractor of a proposed variation. The Contractor must then, as soon as practicable, advise the Superintendent whether the variation is feasible, and, if so, its anticipated effect on project time and cost, including time-related costs (that is, some preliminaries). The Superintendent may direct the Contractor to provide a detailed quotation for the variation, including evidence of cost. The Superintendent must certify the cost of carrying out the variation, which will then become a debt due from the Contractor to the Principal (*subclause 36.2*).

The Superintendent may direct, with or without conditions, a variation for the convenience of the Contractor, but the Contractor is not thereby entitled to an extension of time or extra payment unless the Superintendent so directs (*subclause 36.3*).

VALUATIONS

There are four common procedures used in building and construction contracts for the valuation of variations:

1. by agreement – in all cases,
2. at contract rates, bill of quantities rates or schedule rates – if applicable
3. as daywork – if a valuation cannot be agreed and contract rates, bill of quantities rates or schedule rates are not applicable, or if the contract administrator so directs
4. at reasonable rates (as assessed by the contract administrator) – if a valuation cannot be agreed; contract rates, bill of quantities rates and schedule rates are not applicable; the contract administrator does not wish to use daywork as a basis; or if the contract administrator so directs.

Variations often lead to unanticipated consequential changes in apparently unchanged work, such as:

- changes in the conditions under which the varied work is executed
- changes to the conditions under which *othe*r work is executed
- changes to the preliminaries – that is, site-related overheads – resulting *indirectly* from variations.

The costs of these should be included in the valuation of the variation.

Some contracts, notably the JCC series, require the value of a variation to include all associated delay costs and expenses without *separate* compensation for associated overheads, which are presumably included in the overall costs and expenses. Other contracts, notably AS2124, allow the cost of delay or disruption either to be included

in a variation, or to be treated as a separate issue, and require a reasonable amount for associated overheads to be added.

MW-1 does not distinguish between the valuation of variation claims and that of other types of claim. Neither does it establish any hierarchy of precedence. It simply requires the contractor to submit a claim, backed up by all relevant detailed information. It then requires the contract administrator to assess the claim, including adjustment of time costs.

AS4000 requires the contract administrator to apply a four-level hierarchy of precedence: agreement, contract rates or prices, bill of quantities rates or prices, and reasonable rates or prices. It then requires the contract administrator to price the variation, including any time-related costs. These last are for ongoing preliminaries and must not be confused with delay damages (see Chapter 7).

MW-1: clauses H2–H4

As we saw in Chapter 3, under clause H2 a variation claim must include:

- reference to the instruction that resulted in the claim or, where none has been given, details of the event and the basis of the claim
- a breakdown by trade of the extra costs, including preliminaries and a reasonable allowance for the contractor's overheads and profit (not greater than the rate stated in item 14, 'Percentage for the contractor's overheads and profit', of schedule 1; or, if nothing is stated, 10 per cent)
- reference to bill of quantities rates and prices (if applicable)
- reference to schedules of rates (if applicable)
- any documentation required to be provided under relevant legislation
- any adjustment to the date for practical completion required by the contractor (see Chapter 7)
- any adjustment of time costs associated with the claim (see also Chapter 7)
- detailed records of the cost of carrying out a variation and details of any quotation accepted for the variation.

Presumably the requirement for records in the last item applies only to that part of a variation for which a quotation has not been accepted.

The architect must promptly assess a variation claim (*subclause H3.1*), and, in that process, review and take into account:

- the contractor's detailed claim and any further information requested by the architect
- the bill of quantities if applicable
- the schedule of rates if applicable
- the effect of the claim on the date of practical completion; and
- a reasonable allowance for the contractor's overheads and profit.

The last item is presumably equivalent to the allowance referred to in clause H2 above: that is, not greater than the rate stated in item 14, 'Percentage for the contractor's overheads and profit', of schedule 1; or, if nothing is stated, 10 per cent.

The architect must request the contractor for any further information that may be required (*subclause H3.2*).

The contractor must promptly give to the architect any further information reasonably requested (*subclause H3.3*).

Since, in the case of a negative variation, the contract offers no guidance as to whether the deduction from the contract is to be *increased* or *reduced* by the reasonable allowance for the contractor's overheads and profit, it is presumably open to the architect and the contractor to negotiate an appropriate allowance in each individual instance, within the range of +10 per cent to –10 per cent.

The architect must assess the variation claim, and within 20 working days after receiving the claim issue to the contractor and the owner its decision as to adjustment of both the contract price and the date for practical completion where applicable (*subclause H4.1*).

The contractor must carry out the works in question but, where no agreement has been reached, may dispute the architect's decision under the procedure for settlement of disputes (*subclause H4.2*; and see Chapter 4).

AS4000: subclauses 36.2 and 36.4

As we saw earlier under 'Conditions for variations', the cost of a variation must include any time-related costs (*subclause 36.2*).

The Superintendent must price a variation as soon as possible, using a method in the following order of preference:

1. **agreement**
2. **applicable rates or prices in the Contract**
3. **rates or prices in a bill of quantities or a schedule of rates or prices (whether a contract document or not) where it is reasonable to use them**
4. **reasonable rates and prices, including a reasonable amount for profit and overheads.**

Deductions must include a reasonable amount (that is, a *further* deduction) for profit, but not for overheads. The price calculated by the Superintendent must be added to or deducted from the contract sum (*subclause 36.4*).

Valuation by agreement

If a variation can be valued by agreement, without recourse to teams of consultants and reams of documentation, then one would certainly expect both parties to prefer this method of valuation. The clearest

instance in which an agreement is likely to be easily reached is when the variation is to be carried out by a subcontractor, who submits a fully documented quotation for the work, to which the contractor then adds a margin for overheads, administration and profit.

However, in many instances, it is simply not possible to agree on the value of a complex variation just by 'eyeballing' it and coming up with a realistic figure by sheer intuition alone. In other instances, the parties may well agree that bill of quantities rates will be used in a particular variation, or even in all variations where they are applicable, since this is the simplest, most convenient and most clearly structured method when the work being varied has been fully measured and priced.

The contractor is required to submit a reasonable and detailed price for assessment by the contract administrator, and the contract administrator and the contractor are required to agree the value of a variation if possible.

MW-1 provides for variations to be valued by agreement, but as part of the overall process, not as the preferred method in a hierarchy. AS4000 lists valuation by agreement as the preferred method in a four-level hierarchy. In either case, if a valuation is not agreed, then the variation is required to be valued by other means.

Valuation at bill of quantities rates

Where a variation cannot be valued by agreement, the variation may be valued at bill of quantities rates, unless the contract administrator specifically directs that it be valued as daywork or otherwise. Of course, if the parties have informally agreed that bill of quantities rates will be used in a particular variation or even in all variations where they are applicable then, unless the contract administrator directs that the variation be valued otherwise, it will be valued at bill of quantities rates.

When a variation is valued at bill of quantities rates, its value is calculated initially as the sum of all the individual calculations performed to arrive at the value of each measured item in the variation. These calculations are in the form of:

$$\text{Quantity} \times \text{Rate} = \text{Total}$$

The method of arriving at both the quantities and rates which are derived, rather than taken directly, from the bill of quantities is outside the scope of this text. In all examples used here, it is assumed that the correct procedure has been followed and that 'the basic value of the variation' is the sum of the individual item calculations as described above.

Predetermined or 'reasonable' amounts or percentages may be required to be added to or deducted from the basic value of a variation, depending on the circumstances. Some contracts, notably the JCC series, require the contractor to be compensated for non-time related preliminaries in variations of addition, and for the cost of administering all variations. These contracts also recognise that the contractor's administrative load is reduced where the variation relates to nominated subcontract work and provides for the relevant percentages to be reduced by half in such variations. Other contracts, notably AS2124, require the contractor to be compensated for profit and attendance on variations of addition only where these are related to nominated subcontract work. They impose a deduction for overheads and profit deemed no longer applicable in the case of all variations of omission.

MW-1 provides for variations to be valued at bill of quantities rates, but as part of the overall process, not in any order of preference. AS4000 lists valuation at bill of quantities rates second in a four-level hierarchy of methods.

Valuation as daywork

The contract administrator may order a variation to be valued as 'daywork' if a valuation cannot be agreed either before or soon after commencement of the work, and if the work cannot be valued at bill of quantities rates. Some contracts, notably AS2124, also allow the contract administrator to order to be valued as daywork any excess in the quantity performed beyond the stated limit of accuracy of an item in the schedule of rates. In all instances, the contractor is required to keep an accurate daily record of resources used in daywork.

Contracts may require the valuation of daywork to include:

- the actual value of wages and allowances
- statutory or award payments applicable to wages and allowances
- the actual value of hire charges, services, subcontracts, professional fees and the cost of materials
- delay costs and expenses, sometimes referred to as the cost of delay or disruption.

They may also require some of the following loadings to be added to the valuation of daywork:

- a percentage of wages and allowances
- allowances for non-time related preliminaries
- a reasonable amount either for overheads alone, or, for overheads and profit.

Neither MW-1 nor AS4000 provides for variations to be valued as daywork. However, MW-1 does allow for the valuation of the whole or a part of a variation, or other claim to adjust the contract, at what is tantamount to daywork rates.

MW-1: clause H2

As we saw above in 'Valuations', a variation claim must include detailed records of the cost of carrying out a variation and details of any quotation accepted for the variation (*clause H2*). Presumably the requirement for records applies only to that part of a variation for which a quotation has not been accepted.

Valuation of variations which cause repudiation of a nominated subcontract or supply agreement

Some contracts, notably the JCC series, require that the contractor be compensated for any damages payable to a nominated subcontractor in the event of the contractor being obliged to repudiate the subcontract as a result of the contract administrator ordering a variation, providing that the contractor notifies the contract administrator within the prescribed time. Other contracts specifically rule out such compensation to the contractor.

Neither MW-1 nor AS4000 envisages such a situation.

Examples of valuation

MW-1

Example 6.1 shows cost data relating to a variation which might be ordered by the architect during the course of a project administered under MW-1. This variation involves a net *increase* in the quantum of work to be performed by the contractor's own labour force and subcontractors and an adjustment of time. The architect's next task is to value the variation and hence the associated adjustment to the contract price.

EXAMPLE 6.1
VARIATION DATA: INCREASE IN QUANTUM OF WORK (MW-1)

Basic value of variation	$10 000
Adjustment of time costs	$2 000
Item 14, schedule 1: percentage for contractor's overheads and profit	8%

Example 6.2 shows a proposed procedure for valuing the variation, the cost data and relevant contractual details of which are shown in Example 6.1.

EXAMPLE 6.2
VALUATION OF VARIATION: INCREASE IN QUANTUM OF WORK (MW-1)

Basic value of variation	$10 000
Adjustment of time costs	2 000
Net valuation	$12 000
Add Item 14, schedule 1: percentage for contractor's overheads and profit (8%)	800
Total valuation	$12 800

Example 6.3 also shows cost data relating to a variation which might be ordered by an architect during the course of a project administered under MW-1. This variation, however, involves a net *reduction* in the quantum of work to be performed by the contractor's own labour force and subcontractors. The architect's next task, as before, is to value the variation and hence the associated adjustment to the contract price.

EXAMPLE 6.3
VARIATION DATA: REDUCTION IN QUANTUM OF WORK (MW-1)

Basic value of variation	–$10 000
Item 14, schedule 1: percentage for contractor's overheads and profit	8%

Since, as we saw earlier under 'Valuations', the contract offers no guidance as to whether the deduction from the contract is to be *increased* or *reduced* by the reasonable allowance for the contractor's overheads and profit, both methods are shown.

Example 6.4 shows a proposed procedure for valuing the variation, the cost data and relevant contractual details of which are shown in Example 6.3, where the deduction from the contract is *increased* on the basis that, since there is a reduction in the quantum of work, the contractor's overheads are now proportionally less, as is also the contractor's entitlement to profit.

EXAMPLE 6.4
VALUATION OF VARIATION: REDUCTION IN QUANTUM OF WORK (MW-1) – DEDUCTION INCREASED

Basic value of variation	–$10 000
Less Item 14, schedule 1: percentage for contractor's overheads and profit (8%)	–800
Total valuation	–$10 800

Example 6.5 shows a proposed procedure for valuing the variation, the cost data and relevant contractual details of which are shown in Example 6.3, where the deduction from the contract is *reduced* on the basis that, although there is a reduction in the quantum of work, the contractor's overheads are now increased by the need to administer the variation, and the contractor remains entitled to any profit that was anticipated at the time of tender.

EXAMPLE 6.5
VALUATION OF VARIATION: REDUCTION IN QUANTUM OF WORK (MW-1) – DEDUCTION REDUCED

Basic value of variation	–$10 000
Add Item 14, schedule 1: percentage for contractor's overheads and profit (8%)	800
Total valuation	–$9 200

Note that the two proposed procedures shown in Examples 6.4 and 6.5 for dealing with the variation shown in Example 6.3 are the extremes of the range of possibilities, which depend on the nature of the variation, the circumstances of the project, and the personalities involved.

AS4000

Example 6.6 shows cost data relating to a variation which might be ordered by the Superintendent during the course of a project administered under AS4000. This variation involves a net *increase* in the amount of work to be performed by the Contractor's own labour force and subcontractors. The Superintendent's next task is to value the variation *by agreement, at contract rates, or at bill of quantities rates*, and hence the amount to be added to the contract sum.

EXAMPLE 6.6
VARIATION DATA: INCREASE IN QUANTUM OF WORK (AS4000) – VALUATION BY AGREEMENT, AT CONTRACT RATES OR AT BILL OF QUANTITIES RATES

Basic value of variation	$10 000
Delay damages	$2 000

Example 6.7 shows a proposed procedure for valuing the variation, the cost data and relevant contractual details of which are shown in Example 6.6.

EXAMPLE 6.7
VALUATION OF VARIATION: INCREASE IN QUANTUM OF WORK (AS4000) – VALUATION BY AGREEMENT, AT CONTRACT RATES OR AT BILL OF QUANTITIES RATES

Basic value of variation	$10 000
Delay damages	$2 000
Total valuation	$12 000

Example 6.8 also shows cost data relating to a variation which might be ordered by the Superintendent during the course of a project administered under AS4000. This variation also involves a net *increase* in the amount of work to be performed by the Contractor's own labour force and subcontractors. The Superintendent's next task is to value the variation *at reasonable rates* and hence the amount to be added to the contract sum.

EXAMPLE 6.8
VARIATION DATA: INCREASE IN QUANTUM OF WORK (AS4000) – VALUATION AT REASONABLE RATES

Basic value of variation	$10 000
Delay damages	$2 000
Reasonable amount for profit and overheads	$ 800

Example 6.9 shows a proposed procedure for valuing the variation, the cost data and relevant contractual details of which are shown in Example 6.7.

EXAMPLE 6.9
VALUATION OF VARIATION: INCREASE IN QUANTUM OF WORK (AS4000) – VALUATION AT REASONABLE RATES

Basic value of variation	$10 000
Delay damages	$2 000
Net valuation	$12 000
Add Reasonable amount for profit and overheads	800
Total valuation	$12 800

Example 6.10 also shows cost data relating to a variation which might be ordered by the Superintendent during the course of a

project administered under AS4000. This variation, however, involves a net *reduction* in the amount of work to be performed by the Contractor's own labour force and any subcontractors. The Superintendent's next task is to value the variation by agreement, at contract rates or at bill of quantities rates and, hence, the amount to be deducted from the contract sum.

EXAMPLE 6.10
VARIATION DATA: REDUCTION IN QUANTUM OF WORK (AS4000) – VALUATION BY AGREEMENT, AT CONTRACT RATES OR AT BILL OF QUANTITIES RATES

Basic value of variation	–$10 000

Example 6.11 shows a proposed procedure for valuing the variation, the cost data and relevant contractual details of which are shown in Example 6.10.

EXAMPLE 6.11
VALUATION OF VARIATION: REDUCTION IN QUANTUM OF WORK (AS4000) – VALUATION BY AGREEMENT, AT CONTRACT RATES OR AT BILL OF QUANTITIES RATES

Basic value of variation	–$10 000
Total valuation	–$10 000

Example 6.12 also shows cost data relating to a variation which might be ordered by the Superintendent during the course of a project administered under AS4000. This variation also involves a net *reduction* in the amount of work to be performed by the Contractor's own labour force and subcontractors. The Superintendent's next task is to value the variation *at reasonable rates* and hence the amount to be deducted from the Contract sum.

EXAMPLE 6.12
VARIATION DATA: REDUCTION IN QUANTUM OF WORK (AS4000) – VALUATION AT REASONABLE RATES

Basic value of variation	–$10 000
Reasonable amount for profit	–$500

Example 6.13 shows a proposed procedure for valuing the variation, the cost data and relevant contractual details of which are shown in Example 6.12. It should be noted that the reasonable amount for profit is a further *deduction,* taking away from the contractor the notional profit that it would have expected to make had it carried out the work.

EXAMPLE 6.13
VALUATION OF VARIATION: REDUCTION IN QUANTUM OF WORK (AS4000) – VALUATION AT REASONABLE RATES

Basic value of variation	–$10 000
Less Reasonable amount for profit	–$500
Total valuation	–$10 500

ERRORS IN QUANTITIES

AS4000: subclause 2.5

Where the actual quantity of an item required to be constructed is greater or less than shown in the bill of quantities or a schedule of rates for any reason *other* than a direction to vary the work under the Contract, then discovery of the discrepancy may produce a 'deemed variation' (that is, a variation which does not require a Superintendent's direction).

The discrepancy produces a deemed variation (*subclause 2.5*) where:

- the item is priced as a lump sum (even though unit and quantity are stated)
- the item is priced at a unit rate; or
- the item has been erroneously omitted.

Bills of quantities

Where the bill of quantities is not a contract document (for instance MW-1), there is obviously no question of correcting errors. Similarly, where the status of the bill of quantities as a contract document is limited to descriptions and rates, there too there is no question of correcting errors. Consequently, the discussion that follows refers *exclusively* to bills of quantities that *are* full contract documents: that is, in respect of descriptions, quantities and rates.

The preparation of bills of quantities is as subject to error as any other human activity. The complexity of the process increases the risk of error, but also prompts the implementation of strict quality control procedures to reduce this risk.

The potential errors in a bill of quantities are:

- incorrect quantity of an item
- erroneous inclusion of an item
- erroneous omission of an item
- incorrect description of an item.

Since there is little doubt that the incorrect description of an item in the bill of quantities is indeed an error, the conclusion may be drawn that, under some contracts, an incorrect description constitutes two simultaneous and complementary errors: the erroneous inclusion of one item and the equally erroneous omission of another.

Most contracts require the contractor to notify the contract administrator of deficiencies in quantity, and the contract administrator to notify the contractor of excesses in quantity. Thus, in recognition of the realities of human nature as well as contemporary commercial practice, neither party is required to take any action which might be to its own financial disadvantage.

Since the contract sum is expressed in the bill of quantities as the sum of a series of calculations in the form:

Quantity × Rate = Total

each of which is as prone to error as any other, *all* errors in the bill of quantities are required to be corrected *unless* otherwise provided in the contract. The amount of any correction is usually required to be valued as a variation, and added to or deducted from the contract sum or the amount payable to the contractor.

Some contracts perpetuate a distinctly odd view of what constitutes an error in the bill of quantities, giving no recognition to the fact that changes are frequently made to other tender documents during the tender process, so that the documents ultimately issued for construction may differ in some respects from the tender documents. AS2124 in particular states that the bill of quantities is 'in error' if the items and quantities included in it differ from those required to complete the works in accordance with the specification and the drawings.

AS4000 does not refer to errors in the bill of quantities. It refers only to the actual quantity required being greater or less than shown in the bill of quantities. This covers errors as well as discrepancies caused by issue for construction of later drawings than were available at the time of tender. It requires no adjustment to be made to the amount payable to the contractor *unless* the amount of the correction is $400 or greater.

As we saw in Chapter 1, under MW-1 bills of quantities are *not* to form part of the contract; whereas under AS4000 the bill of quantities may be either part of the contract or not.

AS4000: subclause 2.5

As we saw above, under clause 2, 'Nature of Contract', where the actual quantity of an item required to be constructed is greater or less

than shown in the bill of quantities for any reason *other* than a direction to vary the work under the Contract, then discovery of the discrepancy may produce a deemed variation. However, the discrepancy does *not* produce a deemed variation where the value of the variation would have been less than $400 (*subclause 2.5*). That is, no discrepancy below $400 will be adjusted.

Schedules of rates

As we saw in Chapter 1, AS4000 defines a schedule of rates as a schedule which shows rates of payment for carrying out items of work. Strictly speaking, therefore, the scope for error in such a schedule is limited to:

- **erroneous inclusion of an item**
- **erroneous omission of an item**
- **incorrect description of an item.**

In some instances, the schedule of rates will also include the estimated quantity of each item. In such an instance, the scope for error also includes incorrect quantity of an item.

The logical consequence of using a schedule of rates is that the work performed must be measured progressively and on completion, so that progress and final payments can be made to the contractor. This being so, a superfluous item is self-correcting since, upon remeasurement 'as built', its actual quantity will be nil. A missing or incorrectly described item, on the other hand, must be dealt with as a variation: that is, by adding a new appropriately described item, the quantity of which can then be measured and the unit rate for which can be negotiated.

If, however, a schedule of rates also shows the estimated quantities of the respective items, then the issue arises of a difference between the estimated quantity of an item and the quantity actually performed. Usually, an incorrectly measured item will be automatically corrected upon measurement or remeasurement, and the difference in quantity does not necessarily constitute an error that warrants a variation – except perhaps for a change to a unit rate in the event of a wildly inaccurate estimate.

Under AS4000, if upper and lower limits of accuracy are stated in the contract, then that part of the actual quantity of an incorrectly measured item up to the upper limit will be paid for at the unit rate in the schedule. The balance of the quantity above the upper limit may be dealt with as a variation: that is, by adding a new identically described item, the quantity of which can then be measured and the unit rate negotiated. If the actual quantity falls below the lower

limit, then the entire item may be dealt with as a variation: that is, by negotiating a new rate for the item.

MW-1 has no explicit provision for schedules of rates. However, an item of work for which the exact quantity of work is not known at the time of tendering is commonly dealt with by including a provisional quantity in the bill of quantities, and using in valuations the unit rate entered by the contractor in the priced bill of quantities.

It should be noted that AS4000 does not refer to errors in the schedule of rates, but to instances where the actual quantity is greater or less than shown in the schedule of rates.

AS4000: subclause 2.5

As we saw above, under clause 2, 'Nature of Contract', where the actual quantity of an item required to be constructed is greater or less than shown in the schedule of rates for any reason *other* than a direction to vary the work under the Contract, then discovery of the discrepancy may produce a deemed variation.

However, where an item is priced at a unit rate and limits of accuracy are stated in item 11, 'Quantities in schedule of rates, limits of accuracy', of annexure part A, then the rate in the schedule continues to apply to a discrepancy *within* the stated limits. The discrepancy produces a deemed variation – for an identical item at a different rate – only for differences *outside* the stated limits (*subclause 2.5*). That is, only a surplus above the upper limit or a total below the lower limit requires a new rate to be negotiated for the surplus and the total respectively.

REVIEW

Variations are changes in the scope, quality, time and cost of a building and construction project. They may be generated by:

- a deliberate act on the part of the contract administrator, either emanating from an instruction by the owner or arising from the contract administrator's role in the project; or
- the discovery of an inadvertent error or discrepancy in or between contract documents.

Variations may be grouped into six categories:

- changes in scope
- changes in the character or quality of any material or work
- changes in levels, lines, positions or dimensions
- execution of additional work
- demolition or removal of material or work no longer required by the owner
- deemed variations, that is, variations that do not require a contract administrator's direction.

Variations can only be of a character and magnitude that fit the general scope of the contract. The contractor which has undertaken to build a modest commercial structure cannot be compelled to construct either a skyscraper or a freeway tunnel.

Variations may be valued in any one of four ways:

- by agreement
- at contract rates, bill of quantities rates, or schedule rates
- as daywork
- at reasonable rates.

In certain instances, contracts may make provision for the basic value of variations to be loaded with predetermined allowances for overheads and/or profit. Valuations may also include delay costs, depending on the contract and method of valuation.

A specific instance of an inadvertent error in contract documents is that of errors or discrepancies in measurement, either in a bill of quantities or in a schedule of rates. Contracts may make provision for such errors to be corrected by treating the error as a variation, to which threshold values may apply.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- section H, 'Claims to adjust the contract' (clauses H2 to H4)
- section J, 'Variation to the works' (clauses J1 to J8)
- schedule 1, 'Contract information'.

AS4000 – 1997 *General conditions of contract*:

- clause 2, 'Nature of Contract' (subclause 2.5)
- clause 25, 'Latent conditions' (subclause 25.3)
- clause 36, 'Variations' (whole clause)
- annexure part A.

Aqua Group, Hackett, M and Robinson, R (2003), *Pre-Contract Practice and Contract Administration for the Building Team*, Blackwell Science, Oxford:

- chapter 13, 'Instructions, variations and post-contract cost control'.

Choy, W K and Sidwell, A C (1991), 'Sources of variations in Australian construction contracts', *The Building Economist*, vol 30, no 3, pp 25–30.

Ramus, J and Birchall, S (1996), *Contract Practice for Surveyors*, 3rd edn, Laxton's (Butterworth-Heinemann), Oxford:

- chapter 8, 'Variations'.

REVIEW QUESTIONS

6.1 What are variations, how they are generated, who can authorise them and under what conditions?

6.2 What categories of variations occur in building and construction projects? Cite at least two examples of each category.

6.3 Describe the circumstances that may give rise to a deemed variation.

6.4 Explain what constitutes an error or discrepancy in the bill of quantities, how such errors may arise, and how they may be administered and valued.

6.5 Explain what constitutes an error or discrepancy in the schedule of rates, how such errors may arise, and how they may be administered and valued.

6.6 Describe the circumstances in which the contractor is *not* bound to execute a variation.

6.7 In what circumstances is additional work valued as daywork? Explain how such work may be valued.

CHAPTER 7

DELAYS AND EXTENSIONS

OVERVIEW

One of the key factors in a building and construction contract is the time within which the work is to be completed. So what happens when events occur which make it unlikely that the contractual target date, the 'date for practical completion', will be met?

First of all, it is important to remember that the contractor has a contractual obligation to meet the target date. Second, it is equally important to recognise that events which delay the project, and therefore affect the likelihood of meeting the target date, may be attributable either to actions or omissions by the contractor or to causes beyond the contractor's control.

Where the delays are attributable to actions or omissions by the contractor, there are contractual remedies such as liquidated damages which the owner may invoke to obtain a degree of compensation in the event of late completion of the project (see Chapter 9).

However, where the delays are attributable to causes beyond the contractor's control then, since the contractor is not at fault, the contractor may be granted an extension of the time within which the work is to be completed. Furthermore, where the contractor is not at fault, the contractor may also receive compensation for any extra costs incurred as a result of the delay and of the consequential disruption of work.

This chapter is about delays and extensions of time: the types of event that lead to a delay for which an extension may be claimed, and the costs and expenses of such delay or disruption. It is also about the procedures for claiming and determining extensions of time and the consequential costs, and, since delays are measured in days, the definition of a day for these and other purposes.

The reader is presented with a comprehensive view of the nature of delays and extensions of time in a building and construction contract, the costs and expenses of delay or disruption and the contractual procedures under which these will be administered. It also answers the following questions:

- When is a contractor entitled to an extension of time for practical completion?
- How and by whom is the period of an extension of time determined?
- When is an owner entitled to a reduction of time for practical completion?
- When is a contractor entitled to recover the costs and expenses of delay or disruption?
- How and by whom are the costs and expenses of delay or disruption determined?
- What is a 'day' for the purpose of extensions of time?

EXTENSIONS OF TIME FOR DELAY

Delays and their resulting costs are probably the most fertile field in which complicated contractual disputes grow and proliferate under a building and construction contract. The events which can cause a delay of some kind during the course of a project are always many and various, and are often weird and wonderful. These events may be due to:

- acts or omissions by the contractor
- acts or omissions by the owner or the owner's agents; or
- other events beyond the contractor's control.

However, building and construction contracts are concerned only with those delays that may result in the works being delayed in reaching practical completion: that is to say, delays to 'critical' activities. These are activities which are on the 'critical path' of a construction program for the project. Their start and finish dates are fixed, so that they have no 'float' or discretionary time. The contractor has no time flexibility in implementing such activities. Thus a delay in a critical activity necessarily lengthens the critical path, thereby lengthening the minimum time required for the completion of the works, which are required to be completed by the date for practical completion. In a word, we are here concerned with delay to the project as a whole.

There is no reason, either in contract or in equity, for granting a contractor an extension of time for an event for which the contractor is responsible. However, the contractor *is* entitled to an extension of time for practical completion for any delay in the progress of the works due to a cause beyond the contractor's control, including acts

or omissions by the owner or the owner's agents. Extensions of time are granted in such instances in order to maintain an achievable date for practical completion, and thereby to shield the contractor, which after all is not responsible for the delay, from unfair application of contractual remedies for late completion.

In summary, therefore, an extension of time may be granted to the contractor when an event occurs which fulfils two conditions:

- **the contractor is not responsible for the occurrence of the event; and**
- **the event delays the completion of the works as a whole.**

Under most contracts, notably both the JCC series and AS2124, in order to qualify for an extension of time, the contractor must first notify the contract administrator of the actual or potential delay, its nature and its cause. If and when the delay eventuates, the contractor must lodge a formal claim for an extension of time, either as soon as practicable or within a prescribed time after the *start* of the delay. The contract administrator must then grant a reasonable extension of time, and, in some instances, state the reasons for not granting the full extension of time claimed.

Some contracts, notably AS2124, stipulate that the contractor is *not* entitled to an extension of time for a delay caused by an occurrence for which the contractor is *not* responsible if the delay is concurrent with another delay for which the contractor *is* responsible. When determining the length of an extension, the contract administrator is required to consider whether the contractor has taken proper and reasonable steps to avoid the delay and/or to minimise its effects. AS4000, however, like AS2124, specifically precludes the contract administrator from considering either whether the contractor actually *needs* the extension or what steps the contractor might take to remedy the delay if an extension were *not* granted.

If the contract administrator does not grant an extension of time within the prescribed time, then AS4000 requires that the extension of time claimed by the contractor be deemed to have been granted.

Some contracts, including the JCC series and AS4000, allow the contract administrator to grant an extension of time even though the contractor has not claimed one. Where a delay was caused by the owner or the owner's agents, and the contractor was, therefore, entitled to claim an extension of time but had not done so, granting an extension of time for the eligible though *unclaimed* delay would preserve the owner's right to claim liquidated damages in the event of late completion due to a subsequent delay for which the contractor was responsible.

AS4000 also allows the contract administrator to grant an extension of time even though the contractor may not be *entitled* to one.

MW-1 allows the contractor to claim an extension of time where a delay is due to one or more of the causes listed in the contract. It requires the contractor to state in the appendix its allowance in the contract for delay due to disruptive weather conditions and any other relevant cause. The contractor may claim an extension of time for a delay due to any of these causes, but only once the contractor's allowance for delay due to that cause has been exceeded. Where a delay is due to two or more simultaneous causes, a cause which entitles the contractor to an extension of time *without* costs takes precedence over a cause which entitles the contractor to an extension of time *with* costs.

AS4000 requires an extension of time to be granted only for a delay to the works as a whole, and only where the delay is due to a qualifying cause. It defines a qualifying cause of delay as one which is beyond the contractor's control, other than industrial conditions or inclement weather occurring after the date for practical completion, and excluding any cause listed in the appendix. Where a delay is due to a combination of qualifying and non-qualifying causes, the contract administrator is required to determine the proportion of the delay due to each and to grant an extension of time accordingly.

MW-1: clauses L–L6

The contractor may make a claim for an adjustment to the date for practical completion *and* adjustment of time costs (*subclause L1.1*) where the progress of the works is delayed by any of the following causes and the cause is outside the contractor's control:

Cause 1 Loss or damage to the works and materials or equipment to be incorporated in the works or used on the site

Cause 2 The owner failing to give the contractor possession of the site by the date shown in item 11 of schedule 1

Cause 3 An architect's instruction

Cause 4 An authority failing to give prompt approval for the works

Cause 5 A dispute with a nearby owner or occupier

Cause 6 The owner's consultants failing to promptly provide necessary information to which the contractor is entitled under the contract or which the contractor has requested in writing

Cause 7 Widespread industrial action not specifically involving either the contractor or its subcontractors

Cause 8 Suspension of the necessary works by the contractor for the owner's default

Cause 9 A breach of the contract by the owner

Cause 10 An act of prevention by the owner (that is, one which has the effect of preventing the contractor from fulfilling its obligations under the contract)

Cause 11 Any act or omission by a separate contractor which causes interference to the contractor that a competent contractor could not have foreseen

Cause 12 The discovery of dangerous or contaminated material which causes a relevant authority to issue a written direction, official notice or order

Cause 13 Any delay shown in item 17 of schedule 1.

The contractor must take all reasonable steps to minimise the effect of the delay on the progress of the works (*subclause L1.2*) – otherwise the contractor will not be entitled either to an adjustment of time or an adjustment of costs.

Adjustment of time costs include any costs reasonably incurred by the contractor as a result of a delay due to any of the causes listed above (*subclause L1.3*).

A claim to adjust the date for practical completion, whether or not it also involves adjustment of time costs, is a claim to adjust the contract (*subclause L1.4*).

A claim to adjust the contract must be submitted and processed in accordance with section H of the contract (*subclause L1.5*; and see Chapter 3).

The contractor may make a claim for an adjustment to the date for practical completion, but *not* for adjustment of time costs, where the progress of the works is delayed by one of the following causes (*subclause L2.1*), and where the delay exceeds the contractor's allowance in the respective items of schedule 1:

- **disruptive weather conditions, where the delay exceeds the contractor's allowance in item 18**
- **any other circumstance listed in item 19, 'Other allowances for delay having regard to the contract and the works which do not entitle adjustment of time costs', where the delay exceeds the contractor's allowance.**

A claim to adjust the contract must be submitted and processed in accordance with section H of the contract (*subclause L2.2*; and see Chapter 3).

When the progress of the works is delayed by any cause which entitles the contractor to make a claim *either* for an adjustment of time for practical completion and an adjustment of time costs *or* for an adjustment of time alone, the contractor must notify the architect, within two working days of becoming aware of the facts (*subclause L3.1*), that:

- **the works are being delayed, stating when the delay began, the cause and likely duration of the delay**
- **the delay has ended, stating when the delay ended.**

Any number of delays, each of less than two working days duration, may be notified in the same notice (*subclause L3.2*).

The contractor warrants (that is, guarantees) that the number of working days during which it has undertaken to complete the works includes a reasonable allowance nominated by the contractor for:

- **delays due to disruptive weather conditions, or their effect, that could reasonably**

be anticipated during the time of year that construction will be carried out and which will disrupt a 'critical construction activity'
- other delays that it is reasonable to allow having regard to the nature of the contract and the works.

The contractor's allowances are shown in items 18 and 19 respectively of schedule 1, 'Contract information' (*subclause L4.1*; and see subclause L2.1 above).

A 'critical construction activity' is one that, if delayed, will in turn delay subsequent activities, thus affecting the contractor's ability to achieve practical completion by the date for practical completion (*subclause L4.2*).

Another definition of a critical activity is that it is an activity in a program which is on the critical path and therefore has no float, meaning that it cannot be commenced or completed later than scheduled without affecting the commencement of other critical activities.

The contractor may only claim an adjustment of time for *either* delays due to disruptive weather conditions *or* other delays respectively, shown in items 18 and 19 (see subclause L2.1 above) of schedule 1, 'Contract information', once the delay has exceeded the allowance for the respective cause (*clause L5*).

Where the necessary work is simultaneously delayed by more than one cause, any delay due to a cause which entitles the contractor to make a claim for adjustment of time *without* costs takes precedence over any delay due to another cause which entitles the contractor to make a claim for adjustment of time *with* costs (*clause L6*).

AS4000: clause 1; subclauses 34.1–34.5

As we saw in Chapter 1, a 'qualifying cause of delay' means the cause of any delay which is beyond the Contractor's control, excluding industrial conditions or inclement weather occurring after the date for practical completion and excluding any cause stated in item 23, 'Qualifying causes of delay – Causes of delay for which EOTs will not be granted', of annexure part A (*clause 1*).

The Contractor must ensure that the work under the Contract reaches practical completion by the date for practical completion (*subclause 34.1*).

When either party becomes aware of a probable delay to the work under the Contract, it must promptly notify the Superintendent and the other party of the cause and the estimated delay (*subclause 34.2*).

The Superintendent must grant the Contractor an extension of time for carrying out work under the Contract if:

- the Contractor is delayed in reaching practical completion by a qualifying cause of delay; and

- **the Contractor gives the Superintendent a claim for an extension of time, showing the cause and extent of the delay, within 28 days of when the Contractor should have reasonably become aware of the cause.**

If a *further* delay results from an *ongoing* qualifying cause of delay, for which the Superintendent has previously granted an extension of time, the Contractor must promptly give the Superintendent a detailed claim for the *further* delay (*subclause 34.3*).

If a delay results from a combination of qualifying and non-qualifying causes, the Superintendent must determine the proportion of the delay which is due to each cause.

The Superintendent must consider (*subclause 34.4*) whether the Contractor has taken all reasonable steps to avoid and/or minimise the delay, but may not refuse to grant an extension of time on the grounds that:

- **the Contractor does not need an extension of time in order to meet the date for practical completion; or**
- **the Contractor can make up lost time by committing extra resources.**

Thus all program float – that is surplus time available for non-critical construction activity – belongs to the Contractor and cannot be appropriated by the Principal.

The Superintendent must give the Contractor and the Principal a direction as to any claim by the Contractor for an extension of time within 28 days of receiving the claim. If the Superintendent fails to give such a direction, then the extension of time is deemed to have been granted as claimed.

Even though the Contractor may not be entitled to or has not claimed an extension of time, the Superintendent may nevertheless grant an extension for any reason, prior to the issue of the final certificate (*subclause 34.5*).

Note that granting an extension of time for an entitled but *unclaimed* delay preserves the Principal's right to claim liquidated damages in the event of late completion due to a subsequent delay for which the Contractor is responsible. However, it is unclear in what circumstances it would be in the Principal's interest for the Superintendent to grant an extension of time for an *unentitled* delay.

EXTENSIONS AND REDUCTIONS OF TIME FOR VARIATIONS

Extensions of time for variations

As we saw above, the contractor is entitled to an extension of time for practical completion for any delay in the progress of the works

due to a cause beyond the contractor's control. The action of the contract administrator in ordering additional work leading to a variation may be just such a cause. It should be noted that a variation for additional work does not necessarily entail an extension of time. An extension is granted only if the variation will delay the completion of the works as a whole.

When the contract administrator orders a variation, the contract may require the contractor to notify the contract administrator promptly of the likely extent of any resulting delay. The contractor and the contract administrator are then required to agree an extension of time for any delay caused by the variation. If agreement cannot be reached, the contract administrator is required to determine the extension of time. However, under AS4000, if the contract administrator does not do so within the prescribed time then the extension of time claimed by the contractor is deemed to have been granted.

MW-1 requires the contractor to obtain the contract administrator's approval before proceeding with a variation for which the contractor intends to claim an adjustment of time for practical completion. AS4000 has no separate provision for dealing with extensions of time for variations, hence extensions of time for variations are treated in the same manner as those for delays in general.

MW-1: clauses J2 and J3

If carrying out the instruction will cause an adjustment of time then, unless the architect has requested an estimate or a quotation, the contractor must so notify the architect within 20 working days (*subclause J2.3*).

The contractor may not claim any adjustment to the contract if it carries out an instruction which will cause an adjustment of time, unless it first receives an instruction to proceed (*subclause J2.4*). That is to say, the contractor will forfeit its entitlement not only to an adjustment of time, but also to an adjustment of costs.

As we also saw in Chapter 6, the architect must instruct the contractor (*subclause J3.1*), within five working days after receiving notification that carrying out the instruction will cause an adjustment of time:

- **whether or not to proceed with the variation; or**
- **to provide an estimate of the effect of the variation on the date for practical completion.**

Within 15 working days after receiving all requested or further information, the architect must instruct the contractor whether or not to proceed with the variation (*subclause J3.2*).

Reductions of time for variations

If an increase in the work to be done may sometimes lead to an *increase* in the time required to complete the works, then surely a reduction in the work to be done may likewise lead to a *reduction* in the time required to complete the works.

Some contracts, notably the JCC series, require the contract administrator to notify the contractor that a *proposed* variation is likely to cause a reduction of time for practical completion. The contractor and the contract administrator are then required to agree any reduction of time for practical completion caused by the variation. If they cannot agree and the contract administrator orders the variation to proceed, then the reduction of time proposed by the contractor is deemed to have been granted. A reduction of time for practical completion is implemented *only* if the effect of the variation is to advance the completion of the works *as a whole*.

Neither MW-1 nor AS4000 has any provision for dealing with reductions of time for practical completion.

DELAY OR DISRUPTION COSTS

It is all very well for a contractor to be granted an extension of time for practical completion as a result of delays beyond its control. However, this is only half the story. Delays also have the potential to involve the contractor in additional costs, both direct and indirect. Time, after all, is money.

Direct costs of delay include all time-related costs, such as wages, hire charges and service charges, as well as the related site and head office overheads. Indirect costs include disruption, such as having to re-schedule subcontractors' work and the delivery of materials, given that subcontractors and suppliers may have other commitments that make their co-operation difficult to obtain. Other indirect costs may be the necessarily inefficient use of labour and/or plant, and unavoidable increases in the cost of labour and/or materials over the increased duration of the project. The effect of cost increases over time is discussed in detail in Chapter 8.

The contractor may recover from the owner the costs and expenses of delay or disruption incurred as a result of a delay *only* if the contract administrator has granted an extension of time for practical completion as a consequence. However, not all extensions of time for delay necessarily entail *full* reimbursement of the costs incurred by the contractor. Some contracts, notably the JCC series, clearly distinguish between damages – which involve allocation of fault – and costs – which do not. Such contracts allow the contractor to recover from the owner damages incurred due to actions by

the owner or the owner's agents. They may also allow the contractor to recover a *proportion* of delay costs and expenses incurred due to other causes beyond the control of the contractor, thus placing all such causes *partially* at the contractor's risk and all other causes *totally* at the contractor's risk. If a delay is due to more than one cause, then these contracts deem the first cause to have occurred to be the cause of delay for the purpose of determining the proportion of costs that the contractor may recover.

Other contracts, notably AS2124, require the owner to pay to the contractor the cost of delay or disruption due to causes beyond the contractor's control. They also allow the owner to list specific other causes of delay for which the owner is required to pay to the contractor the cost of delay or disruption. This places all the above causes totally at the *owner's* risk, and all other causes totally at the *contractor's* risk.

MW-1 allows the contractor to recover adjustment of time costs *only* if an adjustment of time for practical completion has been granted as a result of a delay due to one of the causes listed in the contract. It requires the costs to be claimed either as part of an extension of time claim, or as part of the total cost of a variation.

AS4000 allows the contractor to recover delay damages only if a delay was due to a 'compensable cause'. This is defined as an act, default or omission by the owner or the owner's agents, or any cause stated in the appendix. Thus the contractor may be granted an extension of time for a qualifying cause of delay (see above), but be ineligible for delay damages because the qualifying cause is not a compensable cause.

While MW-1 requires a claim for delay costs to be made as part of the associated extension of time claim, AS4000 imposes no such restriction.

MW-1: clauses H2; H5 and L1

As we saw in Chapter 3, a claim to adjust the contract must include any adjustment of time and any adjustment of time costs associated with the claim (*clause H2*).

Adjustment of time costs (including GST) payable to the contractor per working day – according to the status of the works at the time of a delay – are stated in item 15, 'Adjustment of time costs', of schedule 1. Where adjustment of time costs are stated in item 15, the contractor is entitled to reimbursement of these costs in the event of a delay. Where adjustment of time costs are not stated in item 15, the contractor is entitled to reimbursement of actual costs incurred (*clause H5*)

As we saw earlier, adjustment of time costs include any costs reasonably incurred by the contractor as a result of a delay due to

any of the causes listed in subclause L1.1 for which an adjustment of time for practical completion has been granted (*subclause L1.3*).

AS4000: clauses 1; 4; and subclause 34.9

A 'compensable cause' means an act, default or omission by the Principal or any of its agents, or any cause stated in item 26, 'Delay damages, other compensable causes', of annexure part A (*clause 1*).

Where the Works are divided into separable portions, the Superintendent must identify for each separable portion its respective rate for delay damages (*clause 4*). Thus the Superintendent must certify delay damages individually for each separable portion of the Works if the work under the Contract for that portion is delayed for a compensable cause.

The Contractor is entitled to claim delay damages for every day of extension of time which is granted by the Super-intendent for a compensable cause. (That is to say, a qualifying cause of delay does not of itself entitle the Contractor to delay damages; for damages to apply, the qualifying cause must also be a compensable cause.) The Contractor must claim damages by giving a prescribed notice to the Superintendent, who must certify the amount of the assessment, which will then become a debt due to the Contractor from the Principal (*subclause 34.9*; and see Chapter 4).

COUNTING OF DAYS

All contracts include prescribed periods within which the owner, the contract administrator and the contractor must take specific actions, either when initiating a process or when responding to an initiative by another party. These prescribed periods are usually expressed in days. Some contracts, notably the JCC series, define 'days' as working days or business days, whereas others, notably AS2124 and AS4000, define them as calendar days.

MW-1: section S

Working days are Monday to Friday, excluding statutory or public holidays and rostered days off, and any industry shut-down periods applicable to the state or territory in which the site is located (*section S*). Note that working hours on those days are not prescribed.

AS4000: clause 1

Under clause 1, in the Contract:

- references to days mean calendar days
- if the time for doing any act or thing under the Contract ends on a day which is not a working day, the time is deemed to end on the next working day.

REVIEW

Delays in the time for completion may be caused in the progress of a building and construction contract by a wide range of events. These may be actions or omissions by the parties to the contract, but they may equally be unforeseen events such as latent conditions and actions, including legal actions, by third parties.

Where a delay is due to action or omission by the contractor, then the contractor is totally responsible for the effect of the delay on the time for completion. It is also therefore responsible for the cost of any remedial action that may need to be taken to recover the time lost and to avoid the contractual remedies, such as liquidated damages, which may be available to the owner in the event of late completion (see Chapter 9).

On the other hand, where a delay is due to causes beyond the contractor's control, the contractor may claim, and be granted, a reasonable extension of time for completion. Delays inevitably entail disruption of the planned construction sequence and thus trigger additional costs, which the contractor may recover from the owner where an extension of time has been granted.

A common cause of delay is extra work ordered as a variation. Of course, not all variations cause a delay but, where they do, the contractor is eligible for an extension of time as well as for the cost of delay and disruption. Where a variation results in a reduction in the amount of work, some contracts allow the owner to benefit from a negotiated reduction of time for completion.

Extensions and, where applicable, reductions of time are granted in days. These may be either working days or calendar days, according to the type of contract. In some contracts, the counting of days may be modified to exclude weekends, holidays, rostered days off and site close-down periods, according to the purpose for which the days are being counted.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- **section H, 'Claims to adjust the contract' (clause H2 and H5)**
- **section J, 'Variation to the works' (clauses J2 and J3)**
- **section L, 'Adjustment of time' (whole section)**
- **section S, 'Definitions'**
- **schedule 1, 'Contract information'.**

AS4000 – 1997 *General conditions of contract*:

- **clause 1, 'Interpretation and construction of Contract'**

- clause 4, 'Separable portions' (whole clause)
- clause 34, 'Time and progress' (subclauses 34.1 to 34.5; and 34.9)
- annexure part A.

Aqua Group, Hackett, M and Robinson, R (2003), *Pre-Contract Practice and Contract Administration for the Building Team*, Blackwell Science, Oxford:

- chapter 16, 'Delays and disputes'.

Nagarajan, R (1991), 'Claims for delay costs', *The Building Economist*, vol 29, no 4, pp 16–19.

Ramus, J and Birchall, S (1996), *Contract Practice for Surveyors*, 3rd Edition, Laxton's (Butterworth-Heinemann), Oxford:

- chapter 11, 'Claims'.

REVIEW QUESTIONS

7.1 Explain the causes of delay for which extensions of time for delay may be granted and the reasons for granting such extensions.

7.2 How are increases and reductions in the volume of work treated in terms of extensions and reductions of time under the contracts studied?

7.3 Explain how simultaneous causes of delay are treated under the contracts studied.

7.4 What costs and expenses of delay and disruption may be recovered by the contractor under the contracts studied?

7.5 Describe how days are counted for an extension of time for practical completion under the contracts studied. Describe also how days are counted for other contractual purposes.

PART 4

PAYMENTS AND PROJECT COMPLETION

CHAPTER 8

INTERIM VALUATIONS

OVERVIEW

Building and construction projects are usually of relatively long duration and of relatively high value as compared to the owner's or the contractor's other expenditures. If the contractor were obliged to finance the total cost of executing the works for the entire life of the project, then several undesirable consequences would be likely to ensue.

On the one hand, the contractor would be forced either to borrow sufficient funds or to obtain increased overdraft facilities for an extended period. This would increase the cost to the contractor of completing the project, as well as increasing the contractor's exposure to financial risk. On the other hand, the contractor would pass on the net financing costs to the owner with the addition of a charge for overheads and profit. This would, therefore, increase the price to the owner of the completed project by somewhat more than the cost to the owner of directly financing the project. It would also increase the owner's exposure to the risk of contractor insolvency.

An indirect consequence, which should not be overlooked, would be the anti-competitive squeezing out of the market of sound, smaller contractors which, because of their size, might be unable to raise the necessary credit to undertake projects which they were perfectly competent to construct. This, of course, is a tendency that would replicate itself down the scale of project value, most likely leading to the disappearance of the smallest contractors and leaving the top of the project price range to a few very large, well cashed-up companies. The net effect would probably be price rises over the entire project price range.

For this reason, and also to reduce the daily administrative workload of contractors and contract administrators alike, building and

construction contracts usually contain a provision which allows the contractor to claim at prescribed intervals payment for the interim value of work done up to the date of the claim. The owner arranges the project finances directly with a financial institution and makes provision to draw funds periodically to make the payments required under the contract.

This chapter is about interim valuations – that is, contractors' periodic progress claims and the consequent progress certificates and progress payments. It considers payment for materials, goods and plant which are destined for the project but have not yet been incorporated in the works. It also addresses such issues as the protection of payments by the contractor to workers and subcontractors, retention by the owner of a portion of payments earned by the contractor, and the application of 'rise and fall' provisions to lump sum contracts.

It presents the reader with a comprehensive view of the procedures under which interim valuations in a building and construction project are calculated and administered and answers the following questions:

- Why are interim valuations necessary and how are they administered?
- Is the contractor entitled to be paid for unfixed materials stored on the site?
- What is 'retention' and how is it administered?
- Are payments to subcontractors and workers guaranteed by the owner?
- What is 'rise and fall' and why and when is it used?

INTERIM VALUATIONS

The usual procedure for interim payments to the contractor during the life of a project is:

- the contractor assesses the value of work done during the prescribed period and submits a *progress claim* for that amount to the contract administrator
- the contract administrator assesses the value of work done during that period and issues a *progress certificate* for that amount to the contractor and to the owner
- the contractor presents the certificate to the owner for payment, and the owner makes a *progress payment* of the amount certified to the contractor.

Progress claims

The contractor is required to submit a progress claim on the date prescribed in the contract. The claim should be accumulative – that is, based on the total value of work done at the date of the claim, less the amount previously certified by the contract administrator as the

total value of work done at the date of the previous claim. This procedure ensures, without further administrative intervention, that an error in *any* valuation will be automatically corrected by the *next* valuation.

Valuation on an incremental basis – valuation exclusively of the work done *between* successive claims – can only be discouraged in the strongest possible terms. It introduces a series of discrete totals and with them the possibility of perpetrating systemic errors (that is, errors inherent in the *system* of assessment) in each. Such errors inevitably accumulate, and result in an ever-increasing over- or under-payment to the contractor which has the potential to create serious financial problems by the time it is just as inevitably discovered.

The contracts studied express the necessary content of a progress claim in quite different ways. However, in simple terms, the claim includes amounts, valued at the date of the claim, for:

- contractor's work, carried out either by directly employed labour or by domestic subcontractors
- variations to the contractor's work which have been approved by the contract administrator
- unfixed materials and goods
- any other costs chargeable to the project.

Where a contract provides for nominated subcontracts and supply agreements, the claim may also include amounts for:

- nominated subcontractors' work, including variations which have been approved by the contract administrator
- the contractor's percentage, where applicable, on variations to nominated subcontractors' work
- nominated suppliers' materials and goods which have been incorporated in the works.

The following points should be noted when preparing a progress claim:

- the contractor's work is usually valued according to the priced bill of quantities, where applicable
- variations approved by the contract administrator are sometimes included by the contractor in a claim, irrespective of whether or not the work has been executed, as a procedure for recording changes in the scope of work: these should be claimed on the basis of the percentage complete
- the value of a variation to the contractor's work includes any allowance for preliminaries or overheads which is to be paid to the contractor under the contract (see Chapter 6)
- the value of a variation to a nominated subcontractor's work includes any

allowance for preliminaries or overheads which is to be paid to the subcontractor under the subcontract (see Chapter 6)
- the contractor's allowances for a nominated subcontract variation which, where applicable, are to be paid to the contractor for preliminaries or overheads under the head contract (see Chapter 6) are usually shown as a separate variation to the contractor's work, since the subcontract variation is itself shown as a part of the total subcontract work
- nominated suppliers' materials and goods which have been delivered to the site, but have not incorporated in the works, are treated as 'unfixed materials'.

When the total value of work done at the date of the claim has been calculated, the total value of work assessed by the contract administrator as having been done at the date of the *previous* claim is deducted, so as to arrive at the gross value of work done since the previous claim. Finally, the net amount of the claim is calculated by deducting retention from the gross amount of the claim at the rate provided in the contract, up to the contractual limit.

Both MW-1 and AS4000 require the contractor to state in its claim the *total* value of work completed at the date of the claim. MW-1 also requires the contractor to state the amount of GST included in a claim, whereas AS4000 contains no such provision. The absence of such a requirement should not be taken as implying that the contractor is thereby exempted from complying with the provisions of the GST Act.

Similarly, although AS4000 specifically allows the contractor to claim other moneys due to it under the contract, whereas MW-1 contains no such provision, it would be unthinkable for any contractor *not* to be allowed to claim such moneys.

Neither MW-1 nor AS4000 has any provision for nominated subcontractors or suppliers.

MW-1: clauses E12; N2–N3

As we saw in Chapter 1, the owner must pay the contract price to the contractor progressively, in accordance with the contract (*clause N2*).

The contractor may submit a monthly claim to the architect by the date of each month stated in item 25, 'Date for submitting progress claims', of schedule 1; or by an agreed date; or, if nothing is stated or agreed, by the 15th day of each month (*subclause N3.1*).

The claim must set out (presumably in addition to the amount being claimed):

- the contractor's valuation of work completed at the date of the claim
- the value of materials and equipment delivered to the site for incorporation in the works at the date of the claim
- the amount of GST included in the claim.

The claim must be accompanied by any (additional) information shown in item 26, 'Information to be included in a claim for progress payment', of schedule 1 (*subclause N3.2*).

The value of materials and equipment need not be shown as a *separate* amount, but should be stated as having been *included* in the valuation. Indeed, where a claim is based on the bill of quantities, it is not possible to show a separate value, since bill of quantities items are measured inclusive of both labour and materials. Note also that, while the amounts to be set out in the claim are *necessary* to establish the contractor's claim, they are not by themselves *sufficient* to do so. Lastly, note that the first and second amounts relate to the *total* value of work completed, while the third relates to the *current* claim. (A proposed method of calculating the claim is shown in Example 8.2.)

As we saw in Chapter 2, if loss or damage occurs to the works and materials or equipment to be incorporated in the works, the contractor may submit an additional progress claim to the architect for the value of these at the time of the loss or damage (*clause E12*).

Example 8.1 is a simplified proposed method of presenting a contractor's progress claim under MW-1, submitted to the architect on the designated date. It assumes that the value of work completed is less than 50 per cent of the contract price and is based on the same contract data as the later example of a progress claim under AS4000. Note that the amount claimed includes GST, while the progressive valuation does not.

Example 8.2 is a simplified proposed procedure for preparing the calculations supporting a contractor's progress claim under MW-1. The example contains relatively few entries under each category and is, therefore, relatively easy to present in a single table. It also shows the amount of GST included in the claim.

EXAMPLE 8.1
CONTRACTOR'S PROGRESS CLAIM (MW-1)

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

1 February 200X

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to clause N3, 'Progress payments – procedure for contractor', of the contract, we hereby submit for your approval our current progress claim on the abovenamed project for work completed up to 31 January 200X:

Progress claim No 5	$162 954

The details required by clause N3 are as follows:

Valuation of work completed and materials and equipment incorporated in the works at the date of the claim, including unfixed materials and equipment	$544 600
Amount of GST included in the claim	$14 814

As also required by clause N3, our statutory declaration confirming payment of our employees, subcontractors and insurance premiums is attached.

The calculations supporting this claim are also attached for your information and to facilitate the preparation of your progress certificate, which we anticipate receiving within ten (10) working days after you receive this claim, in accordance with clause N4, 'Progress payments – procedure for architect', subclause N4.1, of the contract.

Yours faithfully

Blitzkrieg Constructions Pty Ltd
(The contractor)
att

EXAMPLE 8.2
CALCULATIONS SUPPORTING CONTRACTOR'S PROGRESS CLAIM (MW-1)

PROGRESS CLAIM NO 5	$	$
Contractor's work [*as per bill of quantities, if applicable*]:		
Preliminaries	64 000	
Groundworks	58 000	
Concrete	89 000	
Masonry	67 000	
Structural steel	52 000	
Metalwork #	54 750	
Woodwork	31 000	
Hardware *	9 450	
Electrical installations *	16 800	
Mechanical installations *	21 000	
Contractor's work to date	463 000	463 000
Variations approved:		
V1 Column footings	2 916	
V2 Doors	6 696	
V3 Steel beams	–4 212	
V4 Electrical switchboards	5 940	
V5 Aluminium handrails	756	
V6 Air conditioning ducts	8 100	
V7 Brick partitions	1 404	
Variations approved to date	21 600	21 600
Other contract price adjustments:		
Conditions on site	10 000	
Facilities for separate contractor	5 000	
Increased Authority fee	1 000	
Other contract price adjustments to date	16 000	16 000
Unfixed materials on site:		
Bricks	14 000	
Metalwork	11 000	
Windows	19 000	
Unfixed materials on site this claim	44 000	44 000
Valuation of work to date		544 600
Less Previously assessed value of work		380 000
Valuation of work this claim		164 600
Less Retention this claim (10%)		16 460
Progress claim No 5 excluding GST		148 140
Add GST (10%)		14 814
Progress claim No 5 including GST		162 954

Note that the value of the contractor's work contains the value of *all* subcontractors' work, including any work carried out under a provisional or prime cost sum (marked '*' in the example). As we saw in Chapter 5, the contract price under any contract contains an allowance for overheads, attendance and profit applicable to the administration and supervision of subcontracts. This allowance, which may be either an amount or percentage, is included in the lump sum price by the contractor when tendering. The relevant trade totals thus include the amount of the allowance, which, in this example, is for convenience a uniform 5 per cent.

Note particularly, in this regard, that the supply of metal windows, although the subject of a prime cost sum, does not appear as a discrete item but is part of the overall metalwork trade (marked '#' in the example). The allowance for overheads, attendance and profit is, nevertheless, applied to the portion of the trade which pertains to the windows.

Note also that *all* variations are grouped together and treated alike, irrespective of whether they are carried out by the contractor or by a subcontractor, and irrespective of whether or not they are carried out under a provisional or prime cost sum. As we saw in Chapter 6, the percentage stated in item 14, 'Percentage for the contractor's overheads and profit', of schedule 1 is added to the basic value of each variation. Consequently, their value under MW-1 will differ from that of their counterparts under AS4000 by the allowance in item 14 of schedule 1, which in this example is 8 per cent.

AS4000: subclause 37.1

The Contractor must make progress claims (*subclause 37.1*):

- **in accordance with item 28(a), 'Progress Claims – Times for progress claims', of annexure part A, on the day of each month stated (for submission of claims), for the value of work under the Contract completed by the day of the month likewise stated (for valuation of claims); or**
- **in accordance with item 28(b), 'Progress Claims – Stages of WUC for progress claims', of annexure part A, at the stages stated of completion of the work under the Contract.**

An early progress claim will be deemed to have been made on the (prescribed) date for making that claim.

This means that the Superintendent is not obliged to assess the claim or issue a progress certificate any earlier than if the Contractor had made the claim on the prescribed date. Thus the Contractor is not entitled to an early progress payment as a result of having made an early claim.

Each progress claim must be given to the Superintendent

(*subclause 37.1*), and, (presumably in addition to including the amount being claimed):

- **must include details of the value of work under the Contract completed**
- **may include details of other moneys due to the Contractor under the Contract.**

Note that, as in the earlier MW-1 example, while these values are *necessary* to establish the contractor's claim, they are not by themselves *sufficient* to do so. Note also that the first amount appears to relate to the *total* amount of work completed, while the second clearly relates to the *current* claim. (A proposed method of calculating the claim is shown in Example 8.4.)

Example 8.3 is a simplified proposed method of presenting a Contractor's progress claim under AS4000 submitted to the Superintendent on the designated date. It too assumes that the value of work completed is less than 50 per cent of the contract sum, and is based on the same contract data as the earlier example of a progress claim under MW-1.

Note that, in contrast to MW-1, the value of work completed is the *incremental* value completed since the previous progress claim, and that the amount claimed does not include GST.

Example 8.4 is a simplified proposed procedure for preparing the calculations supporting a Contractor's progress claim under AS4000. This example, too, contains relatively few entries under each category and is, therefore, also relatively easy to present in a single table. It does not show GST since this tax is, in any case, applicable by law to all invoices issued by a party that is registered for GST, and does not, strictly speaking, *need* to be mentioned.

EXAMPLE 8.3
CONTRACTOR'S PROGRESS CLAIM (AS4000)

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

1 February 200X

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to subclause 37.1, 'Progress claims', of the Contract, we hereby submit for your approval our current progress claim on the abovenamed project for work completed up to 31 January 200X:

Progress claim No 5 $146 700

The details required by subclause 37.1 are as follows:

Value of the work under the Contract completed $163 000
Other moneys due to the Contractor under the Contract $0

The calculations supporting this claim are attached for your information and to facilitate the preparation of your progress certificate, which we anticipate receiving within 14 days after you receive this claim, in accordance with subclause 37.2, 'Certificates', of the Contract.

Yours faithfully

Blitzkrieg Constructions Pty Ltd
(The Contractor)
att

EXAMPLE 8.4
CALCULATION SUPPORTING CONTRACTOR'S PROGRESS CLAIM (AS4000)

PROGRESS CLAIM NO 5	$	$
Contractor's work [*as per bill of quantities, if applicable*]:		
Preliminaries	64 000	
Groundworks	58 000	
Concrete	89 000	
Masonry	67 000	
Structural steel	52 000	
Metalwork	39 000	
Woodwork	31 000	
Contractor's work to date	400 000	400 000
Variations approved:		
V1 Column footings	2 700	
V2 Doors	6 200	
V3 Steel beams	–3 900	
V4 Electrical switchboards	5 500	
V5 Aluminium handrails	700	
V6 Air conditioning ducts	7 500	
V7 Brick partitions	1 300	
Variations approved to date	20 000	20 000
Work under provisional sums:		
Electrical installations	16 000	
Mechanical installations	20 000	
Supply of windows	15 000	
Supply of hardware	9 000	
Total as per subcontract:	60 000	
Add Percentage for profit and attendance (5%)	3 000	
Work under provisional sums to date	63 000	63 000
Other contract sum adjustments:		
Conditions on site	10 000	
Facilities for separate contractor	5 000	
Increased Authority fee	1 000	
Other contract sum adjustments to date	16 000	16 000
Unfixed materials on site:		
Bricks	14 000	
Metalwork	11 000	
Windows	19 000	
Unfixed materials on site this claim	44 000	44 000
Valuation of work to date		543 000
Less Previously assessed value of work		380 000
Valuation of work this claim		163 000
Less Retention this claim (10%)		16 300
Progress Claim No 5		146 700

Note that the value of the Contractor's work includes the value of all subcontractors' work *other* than any work carried out under a provisional or prime cost sum, which is grouped separately.

Note again that, as we saw in Chapter 5, the contract sum under any contract contains an allowance for 'profit and attendance' applicable to the administration and supervision of subcontracts. This uniform allowance is stated in item 12, 'Provisional sum, percentage for profit and attendance', of annexure part A and is included in the lump sum price by the Contractor when tendering. The Contractor is then paid any amount payable to a subcontractor plus the allowance. The relevant trade totals thus do *not* include the allowance in item 12 of annexure part A (which in this example is 5 per cent), since the allowance is applied to the *aggregate* of all work claimed which is carried out under a provisional sum.

As in the MW-1 example, *all* variations are grouped together and treated alike, irrespective of whether they were carried out by the contractor or by a subcontractor, and irrespective of whether or not they are carried out under a provisional or prime cost sum. Further, all variations in this example are assumed to have been valued either at bill of quantities rates or at reasonable rates (see Chapter 6). Since no allowance for profit and overheads is applicable to such variations under AS4000, their value will differ from that of their counterparts in the MW-1 example by the allowance in item 14 of schedule 1.

Note further that that there is only a marginal difference between this claim under AS4000 and the same claim under MW-1, apart from:

- the separation from the rest of a trade (in this example, metalwork) of a portion of the trade (in this example, metal windows) supplied under a provisional sum
- the application of item 12 of annexure part A to the value of all work, other than variations, carried out under a provisional sum
- the application of item 14 of schedule 1 to all variations under MW-1
- the absence of any reference to GST.

Progress certificates

The contract administrator is required to assess the value of the contractor's progress claim within the period prescribed by the contract. In doing so, the contract administrator has the following options:

- check the contractor's claim as submitted
- independently assess the value of the claim; or
- a combination of both the above.

The option chosen by the contract administrator in assessing the claim usually depends on two major factors:

- the quality of the contractor's claim documentation
- the relationship and degree of trust between the contract administrator and the contractor.

Differences between the contract administrator and the contractor as to the value of a progress claim are usually a result of one or more of the following:

- calculation errors
- difference of perspective
- the practice of some contractors of recording changes in the scope of work by claiming all approved variations, whether or not they have been carried out
- the self-fulfilling and entirely circular twin propositions:
  - that since the contractor 'always' overclaims so as to maximise cashflow and to minimise the effect of retention, the contract administrator must always reduce the valuation of the claim so as to protect the owner's security; and its corollary
  - that since the contract administrator 'always' reduces the valuation of the claim so as to minimise the owner's outlay, the contractor must always overclaim so as to protect its cashflow.

The contract administrator is required to issue a progress certificate to the contractor within the period prescribed by the contract, and to provide details of any difference between the amount certified and that claimed. However, the contract administrator is not obliged to issue a progress certificate if the contractor has failed to provide any required proof that it has effected any insurance.

On the other hand, the contract administrator may, under specific circumstances, issue a progress certificate even though the contractor has *not* followed the mandatory contractual procedures by submitting a progress claim. Thus MW-1 allows the contract administrator to issue further certificates in any month if the contractor is required to provide additional information about any part of the claim, so as not to delay certification of the balance of the claim. AS4000 allows the contract administrator to issue a certificate in the absence of a progress claim, so as to protect the owner against a possible termination of the contract for non-payment.

Failure by the contract administrator to issue a progress certificate constitutes default by the owner under MW-1; under AS4000 the failure leads only to the progress claim being deemed to be the progress certificate.

AS4000 also provides that the issue of a progress certificate cannot

be taken to mean that the work valued in the certificate has been approved by the contract administrator, but only that the work has been carried out. The absence of such a provision in MW-1 should *not* be taken as implying that the status of progress certificates differs in any way from AS4000.

MW-1 requires the contract administrator to state in the progress certificate the amount of GST included in the gross amount certified, whereas AS4000 has no such requirement. MW-1 also requires the contractor to prepare a tax invoice for the amount of the progress certificate and to present both certificates to the owner for payment. However, the format of the tax invoice under AS4000 would be slightly different, as it is required under the Act (irrespective of the contract) to be for the amount of the progress certificate *plus* the applicable GST. The certificate does not include any deductions such as retention, which are required to be the subject of a separate certificate of deduction, nor does it include GST, which is required to be added in the invoice to the difference between the progress certificate and the certificate of deductions.

MW-1: clauses N4–N5; N8

The architect must issue a certificate to the contractor and the owner for any payment due to either party (but usually the contractor) within ten business days after receiving the contractor's progress claim (*subclause N4.1*).

The architect must take into account (*subclause N4.2*):

- any adjustments to the contract price since any previous assessment
- the value of the work completed at the date of the claim, *less* the cost of rectifying defects
- the value of materials and equipment delivered to the site for incorporation in the works and paid for by the contractor at the date of the claim
- deduction of cash retention if applicable under the contract
- deduction of any claim for a set-off of other monies due to the owner under the contract
- deduction of liquidated damages levied since any previous certificate and due at the date of the certificate
- any other matter under the contract
- GST.

The certificate must state the amount of GST included (in the gross amount certified) and the architect must state the reasons for any difference between the net amount certified and the net amount claimed (*subclause N4.3*).

The architect must promptly ask the contractor for any further information required to assess the claim. If the information relates only to part of the claim, the architect must assess the rest of the claim (*subclause N4.4*).

Presumably, the architect is required to issue a certificate within the prescribed period for the part of the claim which has been adequately documented, while a certificate for the rest of the claim need only be issued within the prescribed period after receiving the requested information. This seems to imply the possibility of multiple certificates within the one month. The alternative – that the contractor must forgo payment until the next monthly claim – appears quite unreasonably punitive.

The party to be paid (again. usually the contractor) must prepare a tax invoice (if the party is registered for GST) for the amount of the certificate and present both the certificate and the invoice to the other party for payment (*clause N5*). Note that an owner which is not engaged in any commercial activity would not be required to be registered for the GST and would therefore neither need nor be entitled to claim an input credit, for which a tax invoice is mandatory.

If the architect fails to issue a certificate within ten business days of receiving the contractor's progress claim, the contractor may give the architect a notice asking it to issue the certificate. If the architect fails to issue the certificate within five working days of issue of the contractor's request, then the contractor may immediately suspend the necessary work for the owner's default (*clause N8*).

Example 8.5 is a simplified proposed method of presenting an architect's progress certificate under MW-1. It is based on the same contract data as the earlier example of a progress claim under this contract.

Example 8.6 is a simplified proposed procedure for preparing the calculations supporting an architect's progress certificate under MW-1. Note that, unlike the later AS4000 example, the claim and the certificate are identical in format.

Example 8.7 is a simplified proposed procedure for presenting the architect's reasons for the difference between the amount claimed by the contractor and the amount later certified for payment.

EXAMPLE 8.5
ARCHITECT'S PROGRESS CERTIFICATE (MW-1)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

15 February 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to clause N4, 'Progress payments – procedure for architect', of the contract, we hereby certify that the following amount is due to you for payment on the abovenamed project for work completed up to 31 January 200X:

Progress certificate No 5 $159 350

The details required by Clause N4 are as follows:

Amount of GST included in the certificate $14 486

The calculations supporting this certificate are attached for your information, as are the particulars of the difference between your progress claim no 5 and progress certificate No 5, as required by subclause N4.3.

Yours faithfully

Bossie, Boots Pty Ltd
(The architect)
att

EXAMPLE 8.6
CALCULATIONS SUPPORTING ARCHITECT'S PROGRESS CERTIFICATE (MW-1)

PROGRESS CERTIFICATE NO 5	$	$
Contractor's work [*as per bill of quantities, if applicable*]:		
Preliminaries	64 000	
Groundworks	58 000	
Concrete	89 000	
Masonry	67 000	
Structural steel	52 000	
Metalwork	51 750	
Woodwork	31 000	
Hardware	9 450	
Electrical installations	16 800	
Mechanical installations	21 000	
Contractor's work to date	460 000	460 000
Variations approved:		
V1 Column footings	2 916	
V2 Doors	6 696	
V3 Steel beams	–4 212	
V4 Electrical switchboards	5 940	
V5 Aluminium handrails	756	
V6 Air conditioning ducts	0	
V7 Brick partitions	864	
Variations approved to date	12 960	12 960
Other contract price adjustments:		
Conditions on site	10 000	
Facilities for separate contractor	5 000	
Increased Authority fee	1 000	
Other contract price adjustments to date	16 000	16 000
Unfixed materials on site:		
Bricks	12 000	
Metalwork	11 000	
Windows	19 000	
Unfixed materials on site this certificate	42 000	42 000
Assessment of work to date		530 960
Less Previously assessed value of work		370 000
Assessment of work this certificate		160 960
Less Retention this certificate (10%)		16 096
Progress Certificate No 5 excluding GST		144 864
Add GST (10%)		14 486
Progress certificate No 5 including GST		159 350

EXAMPLE 8.7
ARCHITECT'S REASONS FOR DIFFERENCE BETWEEN PROGRESS CERTIFICATE AND PROGRESS CLAIM (MW-1)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

15 February 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to clause N4, 'Progress payments – procedure for architect', subclause N4.3, of the contract, we advise the following differences between your progress claim no 5 and progress certificate no 5:

1 The value of metalwork is claimed as $54 750, whereas our assessment is $51 750: a reduction of $3000
2 Variation 6 is claimed, but has not been executed: a reduction of $8100
3 Variation 7 is claimed as $1404, whereas our assessment is $864: a reduction of $540
4 The value of bricks stored on the site is claimed as $14 000, whereas our assessment is $12 000: a reduction of $2000
5 The previous valuation is shown as $380 000, whereas the correct amount is $370 000: a reduction in the amount deducted, and therefore an increase, of $10 000
6 The retention is shown as $16 460, whereas our assessment is $16 096: a reduction in the retention, and therefore an increase, of $364
7 The GST is shown as $14 814, whereas our assessment is $14 486: a reduction of $328
8 Your claim including GST is shown as $162 954, whereas the certificate is for $159 350: a reduction of $3604.

Your claim and the certificate are reconciled as follows:
Progress claim No 5 including GST $162 954

	Deduct	Add	Difference
	$	$	$
Item 1	54 750	51 750	−3 000
Item 2	8 100	0	−8 100
Item 3	1 404	864	−540
Item 4	14 000	12 000	−2 000
Item 5	−380 000	−370 000	+10 000
Item 6	−16 460	−16 096	+364
Item 7	14 814	14 486	−328
Net difference			−3 604
Progress certificate No 5 including GST			$159 350

Yours faithfully

Bossie, Boots Pty Ltd
(The architect)

AS4000: subclause 37.2

The Superintendent must issue two certificates to the Principal and to the Contractor within 14 days after receiving a progress claim:

- **a progress certificate showing the Superintendent's assessment of the payment to be made by the Principal to the Contractor, and stating the reasons for any difference between the certificate and the Contractor's claim**
- **a certificate showing the Superintendent's assessment of retention moneys and any claim for a set-off of other monies due to the Principal under the contract (that is, a certificate of *deductions*).**

If the Contractor fails to make a claim, the Superintendent may nevertheless issue a progress certificate showing details of the assessment, and must then also issue a certificate of deductions. (This protects the Principal against claims by the Contractor of default by the Principal for non-payment.) If the Superintendent fails to issue a progress certificate within 14 days after receiving a progress claim, then the progress claim is deemed to be the progress certificate. The issue of a progress certificate does not constitute evidence that any work under the Contract has been carried out satisfactorily (*subclause 37.2*).

Example 8.8 is a simplified proposed method of presenting a Superintendent's progress certificate under AS4000.

Example 8.9 is a simplified proposed procedure for preparing the calculations supporting a Superintendent's progress certificate under AS4000. Note that, unlike the earlier MW-1 example, the claim and the certificate may not be *quite* identical in format, since AS4000 requires the Superintendent to provide a *separate* certificate of deductions, showing amounts such as retention moneys which are to be deducted from any amount certified as payable to the Contractor, whereas the claim includes the deduction of retention.

Example 8.10 is a simplified proposed procedure for presenting the reasons provided by the Superintendent for the difference between the amount claimed by the Contractor and the amount later certified for payment.

EXAMPLE 8.8
SUPERINTENDENT'S PROGRESS CERTIFICATE (AS4000)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

15 February 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to subclause 37.2, 'Certificates', of the Contract, we hereby certify that the following amount is due to you for payment on the above-named project for work completed up to 31 January 200X:

Progress certificate No 5: $160 000

The calculations supporting this certificate are attached for your information, as are a certificate of deductions and the particulars of the difference between your progress claim No 5 and progress certificate No 5 as required by subclause 37.2

Yours faithfully

Bossie, Boots Pty Ltd
(The Superintendent)
att

EXAMPLE 8.9
CALCULATIONS SUPPORTING SUPERINTENDENT'S PROGRESS CERTIFICATE (AS4000)

PROGRESS CERTIFICATE NO 5	$	$
Contractor's work [*as per bill of quantities, if applicable*]:		
Preliminaries	64 000	
Groundworks	58 000	
Concrete	89 000	
Masonry	67 000	
Structural steel	52 000	
Metalwork	36 000	
Woodwork	31 000	
Contractor's work to date	397 000	397 000
Variations approved:		
V1 Column footings	2 700	
V2 Doors	6 200	
V3 Steel beams	–3 900	
V4 Electrical switchboards	5 500	
V5 Aluminium handrails	700	
V6 Air conditioning ducts	0	
V7 Brick partitions	800	
Variations approved to date	12 000	12 000
Work under provisional sums:		
Electrical installations	16 000	
Mechanical installations	20 000	
Supply of windows	15 000	
Supply of hardware	9 000	
Total as per subcontract	60 000	
Add Percentage for profit and attendance (5%)	3 000	
Work under provisional sums to date	63 000	63 000
Other contract sum adjustments:		
Conditions on site	10 000	
Facilities for separate contractor	5 000	
Increased Authority fee	1 000	
Other contract sum adjustments to date	16 000	16 000
Unfixed materials on site:		
Bricks	12 000	
Metalwork	11 000	
Windows	19 000	
Unfixed materials on site this certificate	42 000	42 000
Assessment of work to date		530 000
Less Previously assessed value of work		370 000
Progress certificate No 5		160 000

EXAMPLE 8.10
SUPERINTENDENT'S REASONS FOR DIFFERENCE BETWEEN PROGRESS CERTIFICATE AND PROGRESS CLAIM (AS4000)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

15 February 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to subclause 37.2, 'Certificates', of the Contract, we advise the following differences between your progress claim no 5 and progress certificate no 5:

1 The value of metalwork is claimed as $39 000, whereas our assessment is $36 000: a reduction of $3000
2 Variation 6 is claimed, but has not been executed: a reduction of $7500
3 Variation 7 is claimed as $1300, whereas our assessment is $800: a reduction of $500
4 The value of bricks stored on the site is claimed as $14 000, whereas our assessment is $12 000: a reduction of $2000
5 The previous assessment is shown as $380 000, whereas the correct amount is $370 000: a reduction in the amount deducted, and therefore an increase of $10 000
6 Your valuation of work this claim is shown as $163 000, whereas the certificate is for $160 000: a reduction of $3000.

Your claim and the certificate are reconciled as follows:

Valuation of work in progress claim no 5: $163 000

	Deduct $	Add $	Difference $
Item 1	39 000	36 000	–3 000
Item 2	7 500	0	–7 500
Item 3	1 300	800	–500
Item 4	14 000	12 000	–2 000
Item 5	–380 000	–370 000	+10 000
Net diffference			–3 000
Progress certificate No 5			$160 000

Yours faithfully

Bossie, Boots Pty Ltd
(The Superintendent)

Example 8.11 is a simplified proposed method of presenting the Superintendent's certificate of deductions accompanying a progress certificate under AS4000.

EXAMPLE 8.11
SUPERINTENDENT'S CERTIFICATE OF DEDUCTIONS (AS4000)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

15 February 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to subclause 37.2, 'Certificates', of the Contract, we hereby certify that the following amount is to be deducted from the moneys due to you pursuant to progress certificate no 5 on the above-named project for work completed up to 31 January 200X:

Certificate of deductions no 5: $16 000

The calculations supporting this certificate are attached for your information.

Yours faithfully

Bossie, Boots Pty Ltd
(The Superintendent)
att

Example 8.12 is a simplified proposed method of preparing the calculations supporting a Superintendent's certificate of deductions under AS4000.

EXAMPLE 8.12
CALCULATIONS SUPPORTING SUPERINTENDENT'S CERTIFICATE OF DEDUCTIONS (AS4000)

CERTIFICATE OF DEDUCTIONS	
Certificate no 5	$160 000
Retention as per item 13(c), annexure part A	10%
Retention this certificate: (10% of $160 000)	$16 000
Other moneys due to the Principal under the Contract	0
Certificate of deductions no 5	$16 000

Unfixed materials, goods and plant

At almost any stage during a building and construction project, there are quantities of 'unfixed materials, goods and plant' – stored both on the site and elsewhere – that are destined for incorporation in the works.

Where the contractor has paid for these materials, goods and plant, it would be unreasonable to oblige the contractor to carry the cost of their ownership until their eventual incorporation in the works, particularly where:

- they are of high value; or
- they have been ordered in bulk so as to ensure uniformity of colour or finish; or
- they have been delivered reasonably in advance so as to be available for incorporation in the works.

For this reason, building and construction contracts usually contain a provision which allows the contractor, subject to strict conditions, to include in a progress claim the value of such unfixed materials, goods and plant at the date of the claim. Furthermore, any other arrangement would result in a higher contract sum, since it would increase the contractor's financial commitments.

In some instances, unfixed materials, goods and plant which have *not* been delivered to the site may also be required to be paid for by the owner. These may be items which are the subject of a formal agreement for payment and will become the property of the owner when paid for.

Generally, unfixed materials, goods and plant are required to be paid for by the owner in progress payments, if:

- the items have been paid for by the contractor
- the items have been delivered to or near the works a reasonable time before their scheduled incorporation in the works
- the delivered items are properly stored and adequately protected; and
- the items are labeled the property of the owner.

MW-1 requires payment for such items which have been paid for by the contractor. AS4000 requires payment *only* for items listed in the appendix, for which the contractor has provided additional security, and which have been paid for by the contractor, are properly stored, adequately protected and labelled the property of the owner.

MW-1: subclause N4.2

As we saw earlier under 'Progress certificates', under clause N4 the architect must take into account when assessing a progress claim the

value of materials and equipment delivered to the site for incorporation in the works and paid for by the contractor at the date of the claim (*subclause N4.2*). This authorises the architect to refuse payment for any materials or equipment which have not been paid for by the contractor.

AS4000: subclause 37.3

The Principal must pay the Contractor for unfixed plant or materials if:

- **they are listed in item 29, 'Unfixed plant and materials for which payment claims may be made', of annexure part A**
- **the Contractor provides the additional security stated in item 13(e), 'Contractor's security – Additional security for unfixed plant and materials', of annexure part A; and**
- **the Contractor satisfies the Superintendent that the plant and materials have been paid for, properly stored and protected, and labelled the property of the Principal.**

The unfixed plant or materials become the property of the Principal upon payment to the Contractor and the release of any additional security (*subclause 37.3*).

Progress payments

The owner is required to pay to the contractor the amount of a progress certificate within the period prescribed in the contract. Late payments may attract interest, at the rate stated in the appendix, on the outstanding amount.

MW-1 requires the contractor to provide a statutory declaration that its workers and subcontractors have been paid, and allows the owner to withhold a payment until the contractor provides the declaration. AS4000 requires the contractor to provide documentary evidence that its workers and subcontractors *and* the subcontractors' workers have been paid, but allows the owner to withhold payment only of the amounts not so documented.

AS4000 also provides that the payment of a progress certificate cannot be taken to mean that the work valued in the certificate has been approved by the contract administrator, but only that the work has been carried out. The absence of such a provision in MW-1 should *not* be taken as implying that progress payments are in any way final and conclusive.

MW-1 requires the contractor to present the progress certificate and a tax invoice for the amount certified to the owner for payment. AS4000, by contrast, requires the contractor to present the progress certificate and the certificate of deductions to the owner for payment. The absence of any reference in AS4000 to a tax invoice

should *not* be taken as implying that the contractor need not present a tax invoice, since this is mandatory under the GST Act.

MW-1: clauses N5–N7; N9 and N15

As we saw above, the party to be paid (usually the contractor) must prepare a tax invoice for the amount of the certificate and present both the certificate and the invoice to the other party for payment (*clause N5*).

The party to make the payment (usually the owner) must pay the amount of any certificate within the period stated in item 4, 'Period for payment of certificates, or release of security', of schedule 1, after presentation of the certificate and the tax invoice (if the party is registered for the GST); or, if nothing is stated, within seven calendar days (*clause N6*). Note that an owner which is not engaged in any commercial activity would not be required to be registered for the GST and would therefore neither need nor be entitled to claim an input credit, for which a tax invoice is mandatory.

Before the owner makes the first progress payment (*clause N7*), the contractor must, as and if required by the contract:

- provide security by unconditional guarantees
- effect either public liability insurance or contract works insurance
- give the architect a program.

As we saw in Chapter 4, if the contractor suspends the necessary work for the owner's failure to make a progress payment on time, and the owner later remedies the default, the contractor may then make a claim to adjust the contract for any costs it has incurred as a result of the suspension (*subclause N9.1*).

Each party must pay interest on payments it has failed to make by the due time. The owner must also pay interest where late payment was caused by the architect's failure to issue a progress certificate on time (*subclause N15.1*).

The rate of interest is stated in item 27, 'Interest rate on overdue amounts', of schedule 1, 'Contract information'; or, if nothing is stated, 10 per cent per annum (*subclause N15.2*).

This interest must be calculated daily from the due date for payment. Interest must be paid on the last day of each month. Interest due but unpaid on that day must be immediately capitalised and added to the amount outstanding (*subclause N15.3*). Thus interest is charged on unpaid interest and the penalty for late payment is compounded monthly.

AS4000: subclause 37.2, 37.5–37.6

The Principal must pay to the Contractor the difference between the progress certificate and the certificate of deductions within seven

days *after* receiving both certificates. If the balance is negative (presumably the Superintendent must notify the Contractor and) the Contractor must pay the difference to the Principal within seven days *of* receiving the notice. Again, the payment of a progress certificate does not constitute evidence that any work under the Contract has been carried out satisfactorily (*subclause 37.2*).

Note that where the duration of an event is two or more days, the term 'within *n* days after' an event could conceivably be interpreted to mean 'within *n* days after' the *end* of the event. However, in this instance, since each of the events occurs at a fixed moment in time, there appears to be no difference in meaning between 'within *n* days *of*' and 'within *n* days *after*' the particular event.

The interest rate on overdue payments is as stated in item 30 of annexure part A; or, if nothing is stated, 18 per cent per annum from the due date for payment (*subclause 37.5*). Note that the method of calculation – daily, weekly or monthly, and whether interest is compounded – is not stated.

The Principal may deduct from a payment to the Contractor any moneys due from the Contractor other than under the Contract (*subclause 37.6*) – that is, moneys owed under *another* contract.

RETENTION

As we saw in Chapter 2, contractors are commonly required to provide security for the proper completion of the works. Retention is the amount deducted progressively by the owner from amounts certified by the contract administrator for payment to the contractor.

Generally, the contract administrator is required to deduct, or the owner may deduct, from the amounts certified for progress payment the percentage to be retained, which is stated in the appendix. The owner must pay each amount so retained into a bank account in the joint names of the owner and the contractor.

The total of all amounts deducted in this way is not to exceed the total amount of security or the limit of retention stated in the appendix. Some contracts, notably AS2124, also provide that amounts retained from the value of work which is either not on the site or not incorporated in the works are not to be counted in the total deducted.

MW-1: clause C2

As we saw in Chapter 2, where security provided by the contractor is to be by cash retention, the owner may progressively retain up to 10 per cent of the value of all progress payments, to a maximum of

the percentage of the contract price stated in item 2 of schedule 1; or, if nothing is stated, 5 per cent of the contract price (*subclause C2.1*).

AS4000: item 13(c)

The percentage of each progress certificate that the Principal may retain is as stated in item 13(c), 'Contractor's security – If retention moneys, percentage of each progress certificate', of annexure part A; or, if no percentage is stated, 10 per cent until the amount or maximum percentage of the contract sum stated in item 13(b), 'Contractor's security – Amount or maximum percentage of contract sum', is reached; or, if no limit is stated, until 5 per cent of the contract sum is reached.

PAYMENT OF WORKERS AND SUBCONTRACTORS

Building and construction contracts provide varying degrees of protection for payments required to be made to companies and persons who are not parties to the contract, such as:

- nominated subcontractors
- domestic subcontractors
- workers of the contractor
- workers of subcontractors.

The level of protection accorded to payments due to the various categories of companies and persons may be quite uneven, both within each contract and between different contracts. Where protection is provided, it is in three stages:

1. a requirement that the contractor provide to the contract administrator, with each claim for payment, a statutory declaration and/or documentary evidence that amounts due have been paid
2. the power of the owner and/or the contract administrator to withhold the payment
3. the power of the owner and/or the contract administrator to pay the amounts due directly to a subcontractor or worker, and to deduct the amount from the payment to the contractor.

The effect of this protection is to limit the likelihood of subcontractor insolvency and labour unrest. Without such protection, it would be all too easy for a financially troubled or unscrupulous contractor to receive payment for work done under the contract and then, instead of paying any part of this to subcontractors and workers, divert the moneys received to other parties according to the contractor's own priorities. The same, of course, would apply to payments made by the contractor to subcontractors.

Some contracts, notably the JCC series, fully protect payments only to *nominated* subcontractors, and only monitor payments to the contractor's workers. They completely ignore payments to domestic subcontractors, and to all subcontractors' workers, none of the latter of whom is in a contractual relationship with the contractor. Other contracts, notably AS2124 and AS4000, fully protect payments to *all* subcontractors and to *all* workers, in that the owner may withhold unpaid amounts from payments to the contractor until the required declaration or evidence is provided, or failing that, until a court order is made for payment to a subcontractor or a worker.

MW-1 requires the contractor to provide with each progress claim a statutory declaration that all payments due to its workers and subcontractors have been made. AS4000 goes further and requires the contractor to provide documentary evidence that all payments due to its workers and subcontractors, *and* to its subcontractors' workers, have been made. However, while AS4000 allows the owner to withhold payment only of the undocumented amounts, MW-1 imposes no such restriction, so that the entire payment may be withheld in the absence of a comprehensive declaration.

MW-1: subclause N3.2

A progress claim must also be accompanied by the contractor's statutory declaration (*subclause N3.2*) that, at the date of the declaration:

- all wages, entitlements and levies due to or on behalf of the contractor's employees have been paid
- all monies due to subcontractors have been paid
- all insurance premiums payable by the contractor have been paid.

Note that the date of the declaration is *not* required to be the date of the claim although, ideally, it should be. Note also that, although the contract does not *explicitly* give the architect the power to withhold payment to the contractor if the declaration is not provided, this power is *implicit* in the unconditional requirement for the contractor to provide the declaration.

AS4000: subclause 38.1–38.2

The Contractor must provide with each progress claim documentary evidence (presumably payroll records and receipts) that all payments relating to the work under the Contract for which the claim is being made, and which are due and payable, have been made to:

- the Contractor's workers
- the subcontractors' workers
- the subcontractors.

Note that therefore the Contractor is responsible for ensuring that subcontractors, too, have paid their workers.

If the Contractor cannot provide such evidence, the Superintendent may direct the Contractor to provide other documentary evidence of payment (presumably such as statutory declarations by the Contractor, subcontractors and workers), to the Superintendent's satisfaction (*subclause 38.1*).

The Principal may withhold the portion of a progress payment relating to moneys due to workers and subcontractors until such time as the Contractor has provided documentary evidence that such moneys have been paid (*subclause 38.2*).

RISE AND FALL

Historically, in times of economic growth, the term 'rise and fall' has been somewhat of a misnomer, inasmuch as continuing inflation has tended to overcompensate for any falls in market price that might have occurred due to increased productivity or competition.

Building and construction projects are usually of considerable duration: at least some months and frequently some years. Consequently, there is a strong probability that the cost of labour and materials will rise and fall periodically, to a greater or lesser extent, during the life of the project. The risk of this periodic 'rise and fall' in costs may be borne either by the contractor under a 'fixed price' contract, or by the owner under a 'rise and fall' contract. Naturally, during an inflationary period, the initial contract sum under a 'rise and fall' contract will tend to be lower than under a 'fixed price' contract. However, the final cost under either type of contract should be much the same, depending on the rise and fall formula used.

Rise and fall provisions are used in lump sum building and construction contracts to compensate owners and contractors for fluctuations in the prices of labour and materials. These provisions enable contractors to submit competitive tenders at *current* prices in the knowledge that they will be compensated for the effects of inflation. The project budget must, therefore, include an estimated allowance for inflation, which will be expended only to the extent made necessary by actual fluctuations.

The consequence of not using rise and fall provisions is that contractors must include in their tenders an estimated allowance for rise and fall to compensate them for fluctuations. A high estimate of rise and fall may lose the project for a tenderer. A low estimate, on the other hand, while it may indeed secure the project, may also lead to financial losses by the contractor with consequential harm to project time, cost and quality. A high estimate by *all* tenderers due to an

industry-wide misjudgment of economic trends will raise the contract sum and provide a windfall profit for the contractor.

'Rise and fall' is a term used in Australia to indicate the extent of these changes from the commencement of a project to any point during its life. The equivalent terms used in the UK and the United States are 'fluctuations' and 'contract price adjustment' respectively. Calculation of the applicable rise and fall is by a formula, or formulae, and relies upon the existence of one or more independently maintained cost indices.

Labour and materials indices for use in conjunction with most rise and fall formulae used in Australia are published monthly by the Australian Bureau of Statistics. Such formulae are applied only to the labour and material supplied by the contractor's directly employed labour and domestic subcontractors and suppliers. Provisional sums for work to be performed by the contractor and provisional quantities are excluded as such until the work is eventually done, whereupon they are valued as labour and materials. Provisional sums for nominated subcontracts and nominated supply agreements are also excluded since they, in any case, contain their own provisions for rise and fall where applicable.

Rise and fall provisions

Neither MW-1 nor AS4000 has any provision for cost adjustment to compensate either the owner or the contractor for any rise or fall in the market price of labour and/or materials. Under these contracts, a cost adjustment provision may be inserted by the owner if required.

A rise and fall formula and the conditions of its application may be tailored to suit the nature of the project, the conditions under which it is to be constructed, the principal categories of labour to be employed, the principal construction materials to be used and the plant to be installed. In a complex formula of this kind, a percentage of the contract sum may be identified as site establishment costs, which are then excluded from the effects of the calculation since they are expended in the first payment period and are therefore not exposed to rise and fall.

Generally, labour and materials indices are not available for the month for which a claim is made, since their compilation is a rather complex activity. Consequently, it is normal procedure for the contractor to claim rise and fall a month *after* the payment to which it applies. This rise and fall claim is usually provisional, since the first indices to be published are themselves usually provisional. It is also normal procedure for the contractor to claim an adjustment to provisional rise and fall when definitive indices are eventually published two or more months later.

Below is a simple, single-factor formula which might be used under a rise and fall provision:

$$\text{Rise \& fall \%} = \frac{\text{New index} - \text{Base index}}{\text{Base index}} \times 100$$

Note that this formula does not distinguish between labour and materials, or between categories of either.

Below is a calculation of rise and fall in accordance with the above formula:

Index for February 427.58
Index for September 439.63

$$\text{Rise \& fall} = \frac{439.63 - 427.58}{427.58} \times 100$$

$$= 2.82\%$$

Rise and fall formulae are usually far more complex equations that involve the compilation and tabulation of index-based calculations over the life of a project. As such, they warrant a separate, detailed examination. They are not further dealt with in this text, since at the time of publication, fluctuation of prices is at historically low levels and the formulae are of little interest and less relevance.

REVIEW

Cashflow is the life blood of the building and construction industry. The industry's system of interim payments to contractors is the cardiac system that keeps its blood flowing.

Interim or progress payments during the life of a project avert the need for a contractor to finance the whole of every project until it is finally handed over to the owner. As it is, the contractor is still required to finance a substantial part of the project. Progress payments are made up to two months after some of the work has been completed, while the contractor is required to deposit security for its performance at the commencement of the project, or the owner is entitled to retain a percentage of the value of completed work as security.

Thus the contractor is required not only to be technically and organisationally competent to perform the work of the project, but also to have the financial capacity to fund a proportion of the total project cost. To oblige the contractor to fund the entire project would be, ultimately, to concentrate the overall capacity to construct in the hands of fewer and wealthier construction companies.

In the normal course of events, the contractor submits to the contract administrator at prescribed intervals incremental progress claims for the value of work carried out since the previous claim. The contract administrator assesses a progress claim and issues a progress certificate stating the amount that the owner should pay to the contractor. The contractor presents the progress certificate to the owner, which makes a progress payment to the contractor of the amount certified.

Among the costs incurred by the contractor which may be included in a progress claim is the value of unfixed materials, goods and plant which are intended for the project but are not yet incorporated in the works. Provision is made for payment on account of these items, subject to conditions which are designed to protect the owner's interest.

Provision may also be made to ensure that the contractor makes any payments due to workers, domestic and nominated subcontractors and suppliers, and to workers of the contractor and of subcontractors. The degree of protection afforded to these third parties is by no means uniform and varies from one contract to another.

As mentioned earlier, the owner is entitled to retain a percentage of the value of completed work as security for the performance of the contractor's contractual obligations. This percentage is stated in the contract and is deducted incrementally from each progress payment until the limit of retention, also stated in the contract, is reached. For instance, 10 per cent of the value of each progress payment might be retained until the total retained reaches 5 per cent of the contract sum, whereupon further payments would be made in full.

Where a lump sum contract requires the contractor to be compensated for fluctuations during the life of the project in the price of labour and materials, then so-called 'rise and fall' provisions are included in the contract. These provide for the magnitude of such fluctuations as they relate to the project to be calculated in accordance with one or more formulae, which are based on independently prepared price indices.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- **section C, 'Security' (clause C2)**
- **section E, 'Insurance' (clause E12)**
- **section N, 'Payment for the works' (clauses N2 to N9 and N15)**
- **schedule 1, 'Contract information'.**

AS4000 – 1997 *General conditions of contract*:

- **clause 37, 'Payment' (subclauses 37.1 to 37.3, 37.5 and 37.6)**
- **clause 38, 'Payment of workers and subcontractors' (subclauses 38.1 and 38.2)**
- **annexure part A.**

Aqua Group, Hackett, M and Robinson, R (2003), *Pre-Contract Practice and Contract Administration for the Building Team*, Blackwell Science, Oxford:

- **chapter 14, 'Interim payments'.**

Ramus, J and Birchall, S (1996), *Contract Practice for Surveyors*, 3rd edn, Laxton's (Butterworth-Heinemann), Oxford:

- **chapter 12, 'Interim valuations'.**

Willis, C J and Ashworth, A (1990), *Practice and Procedure for the Quantity Surveyor*, 9th Edition, BSP Professional Books, London:

- **chapter 15, 'Valuations for interim certificates'.**

REVIEW QUESTIONS

8.1 Describe briefly the standard procedure for dealing with routine progress claims under the contracts studied.

8.2 Explain the circumstances in which the owner is obliged to pay for unfixed materials, goods and plant under the contracts studied. Explain also the safeguards from which the owner benefits in these circumstances.

8.3 Explain the owner's responsibility for payment of certificates under the contracts studied. What are the consequences of late payment?

8.4 Describe the procedure for handling retention under the contracts studied.

8.5 Describe the procedure for protecting payments to subcontractors and workers under the contracts studied.

8.6 Explain the reasons for rise and fall provisions in a building and construction contract, and the likely consequences for the project budget of their omission.

CHAPTER 9

COMPLETION OF THE PROJECT

OVERVIEW

Satisfactory and timely completion is the ultimate objective of a project. This objective is achieved when the contractor has fulfilled all of its contractual obligations to the owner.

One of the contractor's final obligations during a project is to make good any defects in the work. This is a highly complex activity, both in the number of trades and subcontractors employed, and in the variety of materials and goods used. If one were to wait until this and all other contractual obligations were fulfilled before declaring the project complete, then one would have to wait for a very long time indeed after the project reached the stage at which it became fit for occupation and use by the owner.

Consequently, an intermediate stage of completion is interposed between the occupation of the works by the owner and the discharge of all contractual obligations by the owner and the contractor. This stage is known as 'practical completion'. It is followed by the 'defects liability period', during which any defects detected in the work are made good by the contractor. This arrangement permits the owner to occupy the works as soon as they are fit for occupation and use, and likewise permits the contractor to rectify defects *after* the owner has occupied the works.

After the expiry of the defects liability period, the contractor lodges the final claim, the contract administrator issues the final certificate and the owner makes the final payment – thus winding up the project and fulfilling all contractual obligations of both parties.

This chapter is about the completion stages of a project: practical completion; defects liability period; and final claim, certification and payment. It is also about liquidated damages, bonus for early

completion, and the management at the completion stages of issues such as security and retention moneys and protection of payments due to third parties.

It presents the reader with a comprehensive overview of the procedures which are followed at the final stages of a building and construction project and answers the following questions:

- What is practical completion and what is its contractual significance? What is the difference between the date *for* practical completion and the date *of* practical completion?
- What is the defects liability period? What activities may take place during this period?
- What are liquidated damages? How are they assessed?
- How are the final claim, final certificate and final payment administered?
- How are security and retention moneys dealt with at practical completion and at final payment?

PRACTICAL COMPLETION

The term 'practical completion' is one that seems to be confined almost exclusively to building and construction contracts. Before we look at the contractual definitions of the term, it would be as well to examine the meaning of the words used. Since the second word, 'completion', does not pose any semantic problems, let us consider the significance of the first word, 'practical'. The applicable range of meaning in this context is probably covered by the following:

- almost
- virtual
- as such in effect, though not nominally so
- for all practical intents and purposes.

Practical completion is the stage at which the works are *all but* complete. It is achieved when the works are fit for occupation and the use for which they are intended, with all plant having been commissioned and with only such minor work remaining to be carried out and minor defects to be rectified as will not interfere with the intended use of the works.

Practical completion is a highly significant milestone in a project. Its significance is inherent in the five major contractual changes that occur as a direct consequence of the issue by the contract administrator of a notice or certificate of practical completion:

- the owner becomes entitled to take possession of the works and therefore becomes responsible for their insurance against damage resulting from occupation and use; where the contractor has effected the insurance of the

works, the contractor remains responsible for their insurance against damage resulting from construction activity
- the contractor becomes entitled to the release of a proportion, usually half, of the retention fund or of the bank guarantees
- the contractor ceases to be liable for liquidated damages for any further delays to the works
- the defects liability period commences
- the contract administrator's power to order the contractor to carry out additional work ceases, except for work in making good defects.

The date for practical completion is in all cases defined in the contract, thus setting the duration of the project. Irrespective of the actual definition, the date *for* practical completion is always the date by which practical completion is *required* to be achieved. Similarly, the date *of* practical completion, even where not defined in a contract, is the date on which practical completion is *actually* achieved.

MW-1: clauses M1 and D3–D6

The contractor must bring the works to practical completion by the date stated in item 20 of schedule 1, as adjusted under the contract.

Practical completion is that stage (*subclause M1.1*) when, in the architect's reasonable opinion:

- the works are substantially complete
- any incomplete works and defects requiring to be rectified:
  - are few and of a minor nature
  - will not unreasonably affect the owner's occupation and use of the works
  - would be impractical to complete or rectify at the time
- all commissioning tests of any plant and equipment listed in item 21, 'Commissioning tests for practical completion', of schedule 1 have been carried out successfully
- all approvals required from authorities before occupation of the works by the owner have been obtained and copies provided to the architect.

Unless the owner has previously taken possession of the works before practical completion, the owner must take possession of the works upon the issue of the notice of practical completion (*subclause M1.2*).

This clause applies individually to any separable part of the works stated in item 22, 'Separable parts', of schedule 1 (*subclause M1.3*).

As we saw in Chapter 2, from the issue of the notice of practical completion the owner is responsible for the following risks (*clause D3*), which occur on or adjacent to the site:

- illness, disease or death of any person
- loss of or damage to the property of any person
- loss of or damage to:

- the works
- materials or equipment to be incorporated in the works, including items stated in schedule 8, 'Items to be supplied by the owner for incorporation in the works'.

From the issue of the notice of practical completion, the owner must indemnify the contractor for all consequences of any act or omission by the owner or those responsible to the owner (*subclause D4.1*).

From the date of being given possession of the site until the issue of the notice of practical completion, the contractor must promptly make good any loss of or damage (*subclause D5.1*) to:

- the works
- materials or equipment to be incorporated in the works, including items stated in Schedule 8, 'Items to be supplied by the owner for incorporation in the works'
- plant, tools and equipment.

Upon the issue of the notice of practical completion for a separable part of the works, the owner becomes responsible for all risks relating to that part (*clause D6*).

AS4000: clause 1

As we saw in Chapter 1, practical completion means (*clause 1*) that stage when:

- the Works are complete except for minor omissions and defects
- all tests have been passed; and
- all operating and maintenance manuals and other information have been supplied.

Certificate of practical completion

The contractual outcome of the contractor achieving practical completion is the issue by the contract administrator to the contractor of a certificate of practical completion, consequent upon a series of mandatory contractual procedures.

The contractor may be required to advise the contract administrator that it believes that practical completion has been achieved or to request the issue of a certificate of practical completion after *first* giving the contract administrator notice of anticipated practical completion.

The contract administrator is then required to respond by issuing to the contractor either a certificate of practical completion, or a notice stating the reasons for not doing so. MW-1 allows the contract administrator to give the reasons in either of two forms: a notice stating that the works are near practical completion and listing the work

still to be done; or a notice stating that the works are not near practical completion. In both instances, the contractor is required to proceed with the works.

When the contractor has completed the outstanding work under the notice of reasons for not issuing a certificate of practical completion, the contractor must again advise the contract administrator that it believes that practical completion has been achieved and request the issue of a certificate of practical completion.

The contract administrator must then, again, respond by issuing to the contractor either a certificate of practical completion or a notice stating the reasons for not doing so. This process may continue until the contract administrator finally issues a certificate of practical completion.

Issue of the certificate of practical completion allows the owner to take possession of the works, and also triggers the partial release of security and retention moneys and the commencement of the defects liability period. The treatment of security and retention moneys at practical completion is discussed in detail below ('Security and retention moneys').

The contract administrator may also issue a certificate of practical completion even though the contractor has *not* followed the mandatory contractual procedures. If the contract administrator believes that the works have reached practical completion, then it may issue a certificate of practical completion in spite of the fact that the contractor has not notified it of practical completion nor requested the issue of a certificate of practical completion. This permits the owner to occupy the works, and triggers the commencement of the defects liability period, thus preventing the contractor from indefinitely prolonging the contract.

MW-1 provides that practical completion may be *deemed* to have been achieved (that is, achieved by default) if the owner occupies the works before practical completion. Deemed practical completion forces the owner to assume responsibility for the works, including insurances, and triggers the commencement of the defects liability period. It also triggers a *deemed* instruction to revise the construction program, and the contractor may claim for the costs associated with the revision.

Under some contracts, notably the JCC series, the owner may occupy the works in the absence of a certificate of practical completion, *without* triggering practical completion – if it does so with the contractor's consent and following the issue by the contract administrator of a notice of occupancy, which sets out the contractual arrangements under which occupation will take place.

Other contracts, notably AS2124, provide that the contract administrator's failure to follow the mandatory contractual procedures – either by not issuing a certificate of practical completion, or by not stating the reasons for not having done so – does *not* trigger practical completion, but instead constitutes default on the part of the owner. As we saw in Chapter 4, such a default may lead the contractor first to suspend the work and then, ultimately, to terminate the contract.

Many contracts also provide that the issue of a certificate of practical completion does not imply approval or acceptance of any degree of finality in terms of *any* contractual matter, including quality or cost, on the part of either the owner or the contractor. Contractual finality is achieved only with the issue of the final certificate (see later in this chapter).

Neither MW-1 nor AS4000 has any provision to this effect. However, the status of the final certificate in both contracts strongly implies that similar conditions would apply here too.

MW-1: clauses M2–M10

The contractor must give the architect ten working days notice of the date when practical completion is expected to be reached (*subclause M2.1*).

The contractor and the architect must agree a program for inspection of the works. The architect must commence inspection promptly, and must complete inspection within the agreed time; or, if no time is agreed, within ten working days. It must then issue a notice to the contractor and the owner advising them of the architect's decision as to the status of the works in terms of practical completion (*subclause M2.2*).

If the architect decides that the works have reached practical completion, it must issue a notice of practical completion to the contractor and the owner within five working days after completing inspection, stating the date when practical completion was reached (*subclause M3.1*).

The architect must also advise the owner that security must be released in accordance with the contract (*subclause M3.2*). This is presumably at the same time, since no further time frame is prescribed.

If the architect considers that the works have not reached, but are near, practical completion, it must give the contractor and the owner within five working days after completing inspection a statement to that effect, listing what must be done to reach practical completion (*clause M4*).

If the architect considers that the works have not reached, and are not near, practical completion, it must give the contractor and the owner within five working days after completing inspection a

statement to that effect, summarising the reasons for its decision that the works are not near practical completion (*clause M5*).

If the architect gives the contractor a statement that the works have not reached, and either are near or are not near, practical completion, the contractor must promptly do whatever must be done to reach practical completion. The contractor must then (again) notify the architect when it considers the works have reached practical completion. The architect must again inspect the works and give a further statement to the contractor and the owner advising them of the architect's decision as to the status of the works. These procedures must be repeated as many times as may be necessary until the architect considers that the works have reached practical completion (*clause M6*).

If the architect fails to issue either a notice of practical completion or a notice that the works have not reached practical completion within five working days after completing inspection, the contractor may request the architect to issue such a notice or statement (*subclause M7.1*). It should be noted that clauses M4 to M6 above refer to 'giving a statement' and *not* to 'issuing a notice'.

If the architect fails to issue such a notice (or statement) within five working days of the request, the contractor may claim any cost incurred as a consequence (*subclause M7.2*).

A claim to adjust the contract must be submitted and processed in accordance with section H of the contract (*subclause M7.3*; and see Chapter 3).

If the owner wishes to take possession of any part of the works before the whole of the works have reached practical completion, the architect must discuss with the contractor whether the works should be divided into separable parts, and, if so, whether there must be any adjustments to the program (possibly involving an adjustment of time for practical completion) and the contract price arising from this division (*subclause M8.1*).

If the architect and contractor agree (that the works should be divided), the architect must promptly give the contractor and the owner notice that the works are to be divided into defined separable parts (*subclause M8.2*) – and, presumably, give an instruction as to any other adjustments to the contract.

If they do *not* agree that the works should be divided, the architect must after two working days notice give the contractor and the owner notice that the works are to be divided into defined separable parts (*subclause M8.3*) – and, presumably, likewise give an instruction as to any other adjustments to the contract.

If the architect gives notice that the works are to be divided into separable parts, the notice must be accompanied by an amended copy of item 22, 'Separable parts', of schedule 1. If security is by

unconditional guarantees, the contractor and the owner are deemed to have agreed to change the security originally provided so as to provide separate security for each part. If security is by cash retention, the appropriate portion of security for a separable part is the architect's estimate of the proportion that the contract value of the separable part represents of the contract price (*subclause M8.4*).

The owner must cause as little interference as possible to the contractor's remaining work (*subclause M8.5*).

Division of the works into separable parts must be treated as an urgent instruction (*subclause M8.6*; and see Chapter 3).

If the works are divided into separable parts under this clause, the contractor may claim any cost incurred as a consequence (*subclause M8.7*).

A claim to adjust the contract must be submitted and processed in accordance with section H of the contract (*subclause M8.8*; and see Chapter 3).

Where the works have been divided into separable parts, the procedures relating to practical completion of the whole of the works, apart from the architect's failure to issue a notice of practical completion, apply individually to each of the parts (*subclause M9.1*).

When preparing a notice of practical completion for a separable part of the works, the architect must state its estimate of the value of the separable part in terms of the contract price as adjusted for the purpose of release of security for the part (*subclause M9.2*).

If the owner takes possession of the whole of the works (or a separable part of the works) before the architect issues the notice of practical completion, the whole of the works (or the separable part) are deemed to have reached practical completion. The architect must then issue to the contractor and the owner a notice of practical completion for the whole of the works (or the separable part) within five working days after receiving advice that the owner has taken possession, unless the architect has previously issued a notice of practical completion (*subclause M10.1*) – presumably *after* the owner took possession but *before* the architect received the advice.

Taking possession of the whole of the works (or a separable part of the works) before the architect issues the notice of practical completion is deemed to be an architect's instruction to amend the program. The contractor may then make a claim to adjust the contract for the cost incurred in complying with the deemed instruction (*subclause M10.2*; and see Chapter 3).

A claim to adjust the contract must be submitted and processed in accordance with section H of the contract (*subclause M10.3*; and see Chapter 3).

AS4000: clauses 4 and 34

As we saw in Chapter 1, where the Works are divided into separable portions, the Superintendent must identify for each separable portion its respective date for practical completion (*clause 4*). Thus the Superintendent must issue an individual certificate of practical completion for each separable portion of the Works.

The Contractor must give the Superintendent at least 14 days notice of anticipated practical completion. When the Contractor believes that the works have reached practical completion, it must request the Superintendent to issue a certificate of practical completion. The Superintendent must then, within 14 days of (receiving) the request, give to the Contractor and to the Principal a certificate of practical completion; or the reasons for not issuing a certificate (*subclause 34.6*).

As we saw in Chapter 4, failure by the Superintendent to issue a certificate of practical completion, or to give the Contractor the reasons for its non-issue, constitutes default by the Principal. If unremedied, this default may lead the Contractor, in the first instance, to suspend the work, and ultimately to terminate the Contract.

If the Contractor fails to give notice of anticipated practical completion, the Superintendent may nevertheless issue a certificate of practical completion (*subclause 34.6*).

Security and retention moneys

As we saw in Chapter 2, contractors are commonly required to provide security for the proper completion of the works. Owners may also be required to provide security for payments to contractors. Security is provided in order to ensure performance by the party providing the security of its contractual obligations. It is usually provided in the form of either bank guarantees or a retention fund. During the life of the contract, bank guarantees are held by the party to which they are provided, while retention is held by a third party.

Provision of security is a cost to the party providing it and, irrespective of whether the security is provided by the owner or by the contractor, represents a cost to that party. In the case of retention or other security provided by the contractor, the cost is either a fee for the bank guarantees or overdraft charges for the equivalent of the amounts retained. The cost of provision is part of the total cost of constructing the works and is invariably passed on to the owner, together with a mark-up for overheads and profit.

At practical completion, the bulk of the contractor's obligations to the owner have been met, with only the completion of minor unfinished work and the making good of defects remaining. Issue of the certificate of practical completion is an acknowledgement by the

contract administrator that only minor work still remains to be done by the contractor. The risk of non-performance by the contractor is greatly reduced and there is, therefore, a need to retain only sufficient security to ensure performance of this minor work.

Maintaining the full security during the defects liability period would not only be unwarranted, in view of the relatively small amount of work to be guaranteed over an extended period of time, but would also not be cost effective, since the additional cost to the contractor would undoubtedly be built into all tenders and hence would lead to higher contract sums. Consequently, under most building and construction contracts, security provided by the contractor is reduced at practical completion by a proportion, usually half, which is stated in the contract, it being deemed that the remaining half is sufficient to ensure performance.

It would be sensible, and is indeed common practice, for a contractor to provide security in the form of two equal bank guarantees, each for half of the value required. Then, at practical completion, the owner would simply return one of these guarantees to the contractor. If, on the other hand, security was provided by the contractor in the form of a single bank guarantee for the full value required, then at practical completion the contractor would be obliged to obtain a new bank guarantee for the lesser amount, to be exchanged for the original guarantee. (Security is discussed in detail in Chapter 2.)

AS4000 also requires security provided by the owner to be reduced at practical completion.

MW-1: subclause M3.2; clauses C7–C8

As we saw above, when the architect issues a notice of practical completion to the contractor and the owner, the architect must also advise the owner that security must be released in accordance with the contract (*subclause M3.2*).

Upon issue of the notice of practical completion, the owner must release to the contractor 50 per cent of the value of the security then held (*subclause C7.1*).

If security is by cash retention, the architect must issue a certificate to the contractor (and presumably the owner, since all certificates are required to be issued to both parties) for 50 per cent of the value of the security then held. The contractor must then prepare a tax invoice for the amount of the certificate, and present both the certificate and the invoice to the owner for payment. The owner must pay the amount of any certificate within the period stated in item 4, 'Period for payment of certificates, or release of security', of schedule 1, after presentation of the certificate and the tax invoice; or, if nothing is stated, within seven calendar days (*subclause C7.2*).

If security is by unconditional guarantees, the owner must return to the contractor one of the (two equal) guarantees, also within the period stated in item 4 of schedule 1; or, if nothing is stated, within seven calendar days (*subclause C7.3*).

Upon issue of the notice of practical completion of a separable part of the works, the owner must release to the contractor 50 per cent of the appropriate proportion of the security then held (*subclause C8.1*).

If security is by cash retention, the appropriate portion of security is the architect's estimate of the proportion that the contract value of the separable part represents of the contract price. The architect must issue a certificate to the contractor (and, again presumably, to the owner as well) for 50 per cent of the appropriate portion of the security then held. The contractor must then prepare a tax invoice for the amount of the certificate, and present both the certificate and the invoice to the owner for payment. The owner must pay the amount of any certificate within the period stated in item 4 of schedule 1 after presentation of the certificate and the tax invoice; or, if nothing is stated, within seven calendar days (*subclause C8.2*).

If security is by unconditional guarantees, the owner must return to the contractor one of the (two equal) guarantees, also within the period stated (presumably) in item 4 of schedule 1; or, if nothing is stated, within seven calendar days (*subclause C8.3*).

The contract actually refers here to 'Item 1, "Type of security", of Schedule 1, or, if nothing is stated, cash retention'. This is an obvious error that should be corrected by the architect, either by an amendment to the text of the clause, or by an entry in schedule 2, 'Special conditions'.

AS4000: clause 4 and subclause 5.4

As we saw in Chapter 1, where the Works are divided into separable portions, the Superintendent must identify for each separable portion its respective amount for security (*clause 4*). Thus each party's entitlement to security is reduced individually for each separable portion of the Works as and when a certificate of practical completion is issued for that portion.

When the certificate of practical completion is issued, each party's entitlement to security is reduced by the amount or percentage stated in the relevant item of annexure part A.

The Principal's entitlement to security, other than that stated in item 13(e), 'Contractor's security – Additional security for unfixed plant and materials', is reduced by the amount or percentage stated in item 13(f), 'Contractor's security – Contractor's security upon certificate of practical completion is reduced by'; or, if nothing is stated, by 50 per cent.

The Contractor's entitlement to security is reduced by the amount or percentage stated in item 14(d), 'Principal's security – Principal's security upon certificate of practical completion is reduced by'; or, if nothing is stated, by 50 per cent.

Each party must release and return to the other the percentage or amount of security to which that party is entitled within 14 days of the issue of the certificate of practical completion.

The Principal's entitlement to security in item 13(e), 'Additional security for unfixed plant and materials', ceases 14 days after the relevant plant and materials have been incorporated in the Works.

Each party's entitlement to other security ceases 14 days after the issue of the final certificate.

When a party's entitlement to any security ceases, that party must immediately release and return the security to the other party (*subclause 5.4*).

Liquidated damages

The term 'liquidated' simply means 'converted into cash'. Liquidated damages, referred to in some contracts as 'liquidated and ascertained damages', are the damages payable by the contractor to the owner in the event of failure by the contractor to achieve practical completion by the date for practical completion. They are the compensation paid by the contractor to the owner for both direct and indirect financial losses suffered by the owner as a result of being unable to occupy or take possession of the works on the due date. The damages are commonly in compensation for costs such as additional rental to be paid by the owner for accommodation during the delay, or loss of income from commercial premises.

The rate for liquidated damages should be a genuine pre-estimate of the owner's potential losses, but should not be so great as to be construed as a penalty, since the courts have tended to be reluctant to enforce penalties – that is, amounts not related to damage suffered. The rate of damages is stated in the appendix, so that the damages are compensation in full and no action can be taken under the contract to recover higher damages for these losses. The presence of liquidated damages clauses has two principal effects:

- **it limits the contractor's liability for general damages**
- **it spares the owner the necessity of proving in court the extent of damage actually sustained.**

If the contractor fails to achieve practical completion by the due date, then it is required to pay the owner liquidated damages at the rate stated in the appendix. Then, if the amount of liquidated

damages is greater than the payment due to the contractor, the owner may deduct the difference from any future payment.

Both MW-1 and AS4000 allow the contract administrator to provisionally calculate the amount of liquidated damages, and to provisionally deduct this amount from progress payments on account of the liquidated damages that will eventually be recovered from the contractor. They also require the owner to repay to the contractor the relevant proportion of liquidated damages so deducted if an extension of time is granted *after* the damages were imposed.

Some contracts, notably AS2124, allow the owner to limit the contractor's liability for liquidated damages, but the implementation of any such limit may be subject to prior inclusion in the contract by the owner of a standard optional clause to that effect.

MW-1: clauses M11 and M12

If the works have not reached practical completion by the date for practical completion, the architect must notify the owner and the contractor that the owner is entitled to liquidated damages (*subclause M11.1*).

The owner may then, or at any time until the issue of the final certificate or of a certificate after completion following termination by either party, advise the architect whether it intends to enforce its entitlement to liquidated damages (*subclause M11.2*).

The contractor must pay or allow to the owner (as a credit against payment due to the contractor) liquidated damages at the rate per day, including GST, stated in item 23, 'Rate for liquidated damages', of schedule 1 (*subclause M11.3*). It should be noted that the contractor's obligation to the owner is subject to the owner's decision to pursue compensation.

If a separable part of the works has not reached practical completion by its due date, the contractor must pay or allow to the owner (as a credit against payment due to the contractor) liquidated damages at the rate per day, including GST, stated for that part in item 22, 'Separable parts – Rate per day of liquidated damages applicable to part', of schedule 1 (*subclause M11.4*).

If the owner advises the architect that it intends to enforce its entitlement to liquidated damages, the architect must immediately advise the contractor of the owner's intention (*subclause M12.1*).

The architect must deduct in the next certificate the amount of liquidated damages to which the owner is entitled (*subclause M12.2*).

If the date for practical completion is adjusted after a deduction for liquidated damages has been made in a certificate, and the adjustment results in a change to the owner's entitlement to liquidated damages, then the architect must make an appropriate adjustment in the next certificate (*subclause M12.3*).

In most cases, a further adjustment of time usually means that the date for practical completion has been *put back* and, consequently, that *excessive* liquidated damages have been imposed which must now be *repaid*. Very occasionally, however, the date for practical completion may be *brought forward* and, consequently, *inadequate* liquidated damages have been imposed which must now be *increased*.

AS4000: clause 4 and subclause 34.7

As we saw in Chapter 1, where the Works are divided into separable portions, the Superintendent must identify for each separable portion its respective rate for liquidated damages (*clause 4*). Thus the Superintendent must certify liquidated damages individually for each separable portion of the Works if the work under the Contract does not reach practical completion by that portion's due date.

If the work under the Contract does not reach practical completion by the date for practical completion, the Superintendent must certify as due and payable to the Principal liquidated damages at the rate per day stated in item 24, 'Liquidated damages, rate', of annexure part A.

Liquidated damages are payable for every day after the date for practical completion until and including the earliest of:

- **the date of practical completion**
- **termination of the contract; or**
- **the Principal taking the work under the Contract out of the hands of the Contractor.**

If the Superintendent directs an extension of time after the Contractor has paid or the Principal has deducted liquidated damages, the Principal must immediately repay to the Contractor the liquidated damages representing the days for which the extension of time has been directed (*clause 34.7*).

Bonus for early practical completion

If liquidated damages are the 'stick' in a building and construction contract, then a bonus for early completion is the corresponding 'carrot'.

As we saw earlier, the owner may claim liquidated damages from the contractor in the event of late practical completion. However, circumstances may arise during the life of a project which make it financially more advantageous for the contractor to pay liquidated damages than to invest the additional resources necessary to achieve timely practical completion. If timely or even early completion of a project is a truly significant factor, then the owner may elect to provide an incentive to the contractor to achieve

early practical completion. This would involve including in the contract, in addition to liquidated damages, a bonus for early completion.

An unfortunate outcome of a contractual bonus for early completion is that tenderers, quite understandably, tend to factor the bonus into their tender and the eventual contractor inevitably treats it as a part of the contract sum, and therefore not a bonus but an entitlement. This situation poses considerable problems for a contract administrator who is trying to administer the contract as it was written, and not as the contractor now imagines it. A sensible alternative might be to exclude the bonus from the tendering process altogether, and then to negotiate it directly with the contractor *after* first approving a realistic construction program (see Chapter 3).

AS4000 allows the owner to offer the contractor a bonus for early practical completion. MW-1 has no such provision but, if required, a provision to this effect could be inserted in the blank schedule 2, 'Special conditions', of the contract.

AS4000: clause 4 and subclause 34.8

As we saw in Chapter 1, where the Works are divided into separable portions, the Superintendent must identify for each separable portion its respective amount for the bonus for early completion, where applicable (*clause 4*). Thus payment of the bonus to the Contractor is made individually for each separable portion of the Works as and when a certificate of practical completion for each portion is issued.

The Superintendent must certify the bonus for early practical completion, if any, payable to the Contractor. The bonus per day is stated in item 25(a), 'Bonus for early practical completion – Rate', of annexure part A, and is payable to the Contractor for every day that the date *of* practical completion is earlier than the date *for* practical completion. The total amount of bonus must not exceed the limit stated in item 25(b), 'Bonus for early practical completion – Limit' (*subclause 34.8*).

Payment of workers and subcontractors

As we saw in Chapter 8, building and construction contracts provide varying degrees of protection for payments required to be made to companies and persons who are not parties to the contract. Since all payments prior to the final payment are effectively progress payments, all procedures relating to protection of such payments in connection with a claim lodged at practical completion are identical with the corresponding procedures for progress claims discussed in Chapter 8.

DEFECTS LIABILITY PERIOD

The defects liability period, sometimes loosely referred to in the industry as 'the maintenance period', is a fixed period which is included in the contract and which commences on the date of practical completion. It is a period that is considered by the owner to be of a duration within which the great majority of potential defects in materials and workmanship could reasonably be expected to manifest themselves.

The reason for having a defects liability period is, quite simply, that it is just not possible to inspect the works of a building or construction project at completion so effectively as to detect not only existing but also potential defects. Buildings and other structures move, materials shrink, and defects which were not at all apparent upon inspection become all too apparent in the process of occupation and use. Obviously, if the works have taken a year to complete then, at practical completion, some of the work was performed a year earlier and some only the day before.

The contractor is required to complete any minor work that is incomplete at practical completion, and to make good or rectify within a stated reasonable time at no cost to the owner any defects that are apparent at practical completion or are discovered *during* the defects liability period. When making good defects, the contractor is required to minimise any inconvenience to the owner or occupier of the works. While MW-1 allows the contract administrator to instruct the contractor at any stage of the contract to make good defects, AS4000 requires the instruction to be given *during* the defects liability period.

If the contractor does not make good a defect in the works when directed to do so, the contract administrator has the discretion to pay others to carry out the necessary work and then charge the cost to the contractor. AS4000 also allows the contract administrator the discretion to accept defective work and to deduct the difference in value from the contractor's entitlements.

Both MW-1 and AS4000 allow the contract administrator to set a *second* defects liability period for any part of the works in which a defect has been made good. This power is usually exercised only where a major part of the works or a major defect is involved, commonly one affecting some kind of plant installation.

During the defects liability period, the owner retains a proportion, usually half, of the security and/or retention moneys (see above) to ensure that the contractor performs its obligation to complete work and to make good defects.

MW-1: clauses M13–M16

The architect may at any stage during the contract instruct the contractor to correct any defects or finalise any incomplete work within

the agreed time stated in the instruction; or, if no time is stated, within ten working days after receiving the instruction. The contractor must comply with the instruction (*clause M13*).

The contractor must correct any defects or finalise any incomplete work within the appropriate time frame or, alternatively, show reasonable cause for the (actual or anticipated) failure and provide to the architect an acceptable program for rectifying the problem. If the contractor fails to do so, the owner may employ another person to rectify the problem and charge the resulting cost to the contractor (*subclause M14.1*).

If the owner employs another person to rectify the problem, the owner may make a claim to adjust the contract (*subclause M14.2*).

If the owner makes a claim to adjust the contract, the architect must promptly assess the claim and may issue a certificate to the owner and the contractor, stating the amount of GST included (in the gross amount certified) and the reasons for any difference between the net amount certified and the net amount claimed (*subclause M14.3*). This subclause is mere window-dressing, since in the vast majority of such instances, it is not the owner, but the architect on the owner's behalf, who makes the claim, so the amount claimed will, in any case, be the amount certified.

The defects liability period commences on the date of practical completion of the works. It is the period stated in item 24, 'Defects liability period for the works', of schedule 1; or, if nothing is stated, 12 months (*subclause M15.1*).

Where the works are divided into separable parts, the defects liability period for each part commences on the date of practical completion of that part. It is the period stated in item 22, 'Separable parts – Defects liability period for part', of schedule 1; or, if nothing is stated, 12 months (*subclause M15.2*).

Where any part of the works has undergone significant rectification during the defects liability period, the architect may notify the contractor at the time of accepting the rectified work that a *further* defects liability period, of equal length, will apply to the rectified work (*subclause M15.3*). The further defects liability period commences on the date of acceptance of the rectified work.

The contractor must promptly return to the site and correct any defect or finalise any incomplete work:

- which required rectification at practical completion; or
- of which it becomes aware during the defects liability period
  - by instruction from the architect; or
  - from its own observations.

The contractor's obligation does not end with the defects liability period, but continues until the rectification is complete (*subclause M16.1*).

The architect may not instruct the contractor to correct any defect or finalise any incomplete work which is *first* discovered after the end of the defects liability period, other than a *latent* defect, in which case the instruction must be given before the issue of the final certificate (*subclause M16.2*). A 'latent defect' is one that was present but not observable during the defects liability period; it is not one that simply escaped notice.

AS4000: subclause 29.4 and clause 35

The defects liability period commences at 4:00 pm on the date of practical completion of the works. It is the period stated in item 27, 'Defects liability period', of annexure part A; or, if nothing is stated, 12 months.

The Contractor must carry out rectification work at times and in such a way as to minimise any inconvenience to the occupants or users of the Works.

The Contractor must rectify as soon as possible after the date of practical completion any defects existing at that date.

The Superintendent may direct the Contractor during the defects liability period to rectify any defect by a stated date. The Superintendent may direct that there be a separate defects liability period of stated duration for the work in rectifying a particular defect. This separate period must commence at 4:00 pm on the date the rectification is completed and may not exceed the period stated in item 27. All the provisions of the Contract which relate to the main defects liability period also apply to any separate defects liability period.

If the Contractor does not commence or complete an item of rectification by the stated date, the Principal may pay others to carry out the necessary work, without prejudice to the Principal's rights under the Contract (that is, without the Principal forfeiting its right to terminate the Contract). The Superintendent must certify the cost of carrying out the work, which will then become a debt due from the Contractor to the Principal (*clause 35*).

As we saw in Chapter 3, instead of directing the Contractor to rectify any defective material or work, the Superintendent may direct the Contractor that the Principal will accept the defective materials or work (at a reduced cost). This direction produces a deemed variation (*subclause 29.4;* and see Chapter 6).

FINAL CLAIM, CERTIFICATE AND PAYMENT

In general terms, the procedure for closing the contract after practical completion follows three steps.

First, after the expiry of the defects liability period, the contractor must submit to the contract administrator a final claim when all of the contractor's contractual obligations have been fulfilled. This is a claim for payment by the owner to the contractor of all moneys still outstanding at the end of the contract. No further claims may then be made by the contractor under the contract.

Second, after receiving the contractor's final claim, the contract administrator must issue to the contractor (and, under some contracts, to the owner) a final certificate. This is a certificate for all moneys payable by the owner to the contractor at the end of the contract. Unless dispute resolution proceedings have been taken by either party, the final certificate is evidence that the works have been satisfactorily completed.

Third, after presentation by the contractor of the final certificate, the owner must pay to the contractor the final payment, which is for the amount of the final certificate. Late payment of the amount certified attracts an interest penalty.

Final claim

The contractor's final claim in a building and construction contract is final in the sense that it is the last of the series of claims which may be made by the contractor from the owner. It is also final in the additional sense that, in *formally* stating that this is the final claim, the contractor declares that it will not make any further claim under the contract. The final claim should include the completion of any incomplete minor work outstanding at practical completion and, where applicable, the balance of retention moneys.

The contractor is required to submit a final claim to the contract administrator after the expiry of the defects liability period and within the period allowed for lodgment. The final claim is required to show all amounts claimed by the contractor.

MW-1 allows the contract administrator to determine the final claim, should the contractor fail to submit one when requested. This claim is then deemed to be the contractor's final claim.

AS4000 specifically bars any claim by the contractor after the period allowed for lodgment of the final claim. While MW-1 does not specifically bar such a claim, it is entirely possible that a court would rule that the period for allowed for lodgment constitutes an implicit time bar.

MW-1: clause N10

The contractor may submit to the architect a final claim for a separable part or the whole of the works (*subclause N10.1*) when:

- all defects liability periods have ended
- the contractor has rectified all defects and finalised all incomplete work; and
- the works have been completed in accordance with the contract.

The contractor's final claim must identify any GST included in the claim (*subclause N10.2*).

The contractor must submit a final claim within 20 working days after receiving the architect's request to do so (*subclause N10.3*).

If the contractor fails to submit a final claim after having received the architect's request to do so, the architect may determine the final claim (*subclause N10.4*) – that is, the contractor will be *deemed* to have submitted the claim as determined by the architect.

After the contractor has submitted a final claim, or is deemed to have done so, the contractor may not make any further claim under the contract (*subclause N10.5*).

Example 9.1 is a simplified proposed method of presenting a contractor's final claim under MW-1, submitted to the architect on the designated date. The format of the final claim is rather different from the format that was used in the presentation of progress claims in Chapter 8. It consists of a letter submitting the claim, a single page summary of the details and then the details themselves. These are presented separately, section by section, in full substantiation of the claim. In actual fact, there need be no difference in format between progress and final claims. However, final claims tend to be longer and more complex than *early* progress claims and are, therefore, more likely to require a rationalised format of this type. Consequently, the alternative format is introduced at this hopefully appropriate point.

Note that since, unlike progress claims, the project is now 100 per cent complete, a progressive valuation would be quite redundant.

EXAMPLE 9.1
CONTRACTOR'S FINAL CLAIM (MW-1)

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

1 August 200X

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to Clause N10, Final claim – procedure for contractor, of the contract, we hereby submit for your approval our final claim on the abovenamed project:

Final claim	$38 423
Total GST included	$3 493

The calculations supporting this claim are attached to facilitate the preparation of your final certificate, which we anticipate receiving within ten (10) working days after you receive this claim, in accordance with clause N11, 'Final claim – procedure for architect', of the contract.

Yours faithfully

Blitzkrieg Constructions Pty Ltd
(The contractor)
att

Example 9.2 is a simplified proposed method of presenting the summary of calculations supporting the contractor's final claim. This summary shows a single-line item for each separate component of the claim, the details of which are shown in one of the accompanying schedules. It also shows the amount of GST included in the claim.

EXAMPLE 9.2
SUMMARY OF CALCULATIONS SUPPORTING CONTRACTOR'S FINAL CLAIM (MW-1)

FINAL CLAIM	$
Contractor's work [*as per bill of quantities, if applicable*] (schedule A)	679 500
Provisional sums (schedule B)	350 000
Prime cost sums (schedule C)	40 000
Variations approved (schedule D)	71 280
Adjustment of provisional sums (schedule E)	12 600
Adjustment of prime cost sums (schedule F)	11 550
Other contract price adjustments (schedule G)	20 000
Total value of work excluding GST	1 184 930
Less Progress certificates excluding GST (schedule H)	1 150 000
Final claim excluding GST	34 930
Add GST (10%)	3 493
Final claim including GST	38 423

Examples 9.3 to 9.9, which follow, are simplified proposed methods of presenting schedules of the various components of a contractor's final claim under MW-1 as summarised in Example 9.2.

Example 9.3 is a simplified example of a schedule of the contractor's work.

EXAMPLE 9.3
SCHEDULE OF CONTRACTOR'S WORK (MW-1)

SCHEDULE A – CONTRACTOR'S WORK [*as per bill of quantities, if applicable*]	$
Preliminaries	64 000
Groundworks	58 000
Concrete	89 000
Masonry	67 000
Structural steel	52 000
Metalwork #	40 250
Woodwork	51 000
Hardware #	10 750
Roofing	54 000
Windows	30 000
Doors	32 000
Finishes	31 000
Painting	28 000
Hydraulics	32 000
Drainage	23 000
Electrical installations *	9 000
Mechanical installations *	7 000
Exterior elements *	1 500
Total contractor's work	679 500

Note that the value of the contractor's work contains the value of *all* subcontractors' work, including any work carried out under a provisional or prime cost sum (marked '*'). As we saw in Chapter 5, the contract price under any contract contains an allowance for overheads, attendance and profit applicable to the administration and supervision of subcontracts. This allowance, which may be either an amount or percentage, is included in the lump sum price by the contractor when tendering. The relevant trade totals thus include the amount of the allowance which, in this example, is for convenience a uniform 5 per cent.

Note particularly, in this regard, that the supply of metal windows and the supply of hardware, although each the subject of a prime cost sum, do not appear as discrete items but are part of the overall metalwork and hardware trades (marked '#') respectively. The allowance for overheads, attendance and profit is, nevertheless, applied to the portion of the trade which pertains to supply of components.

Note also that *all* variations approved to *any* work are grouped together in a separate schedule.

Example 9.4 is a simplified schedule of provisional sums.

EXAMPLE 9.4
SCHEDULE OF PROVISIONAL SUMS (MW-1)

SCHEDULE B – PROVISIONAL SUMS	$
Electrical installations	180 000
Mechanical installations	140 000
Landscaping	30 000
Total provisional sums	350 000

Example 9.5 is a simplified schedule of prime cost sums.

EXAMPLE 9.5
SCHEDULE OF PRIME COSTS SUMS (MW-1)

SCHEDULE C – PRIME COST SUMS	$
Supply of windows	25 000
Supply of hardware	15 000
Total of prime cost sums	40 000

Example 9.6 is a simplified schedule of variations approved.

EXAMPLE 9.6
SCHEDULE OF VARIATIONS APPROVED (MW-1)

SCHEDULE D – VARIATIONS APPROVED	$
V1 Column footings	2 916
V2 Doors	6 696
V3 Steel beams	–4 212
V4 Electrical switchboards	8 640
V5 Aluminium handrails	756
V6 Airconditioning ducts	12 960
V7 Brick partitions	1 404
V8 Revisions to roofing and gutters	11 772
V9 Stainless steel eaves beams	9 396
V10 Revisions to ceiling finishes	–1 296
V11 Revisions to light fittings	1 728
V12 Additional cable trays	4 104
V13 Revisions to fences and gates	4 536
V14 Revisions to thermostats	6 912
V15 Revisions to air registers	4 968
Total variations approved	71 280

Note that *all* variations are grouped together and treated alike, irrespective of whether they are carried out by the contractor or by a subcontractor, and irrespective of whether or not they are carried out under a provisional or prime cost sum. As we saw in Chapter 6, the percentage stated in item 14, 'Percentage for the contractor's overheads and profit', of schedule 1, is added to the basic value of each variation. Consequently, its value will differ from that of its counterpart under AS4000 by the difference between the allowance in item 14 of schedule 1, which in this example is 8 per cent, and the allowance of 5 per cent in the later AS4000 example.

Example 9.7 is a simplified schedule of adjustments to the contract price for the difference between the provisional sums for work to be carried out by subcontractors and the cost of performance of the work.

As we saw in Chapter 5, where the cost of performance is greater than the provisional sum, the difference, together with the percentage stated in item 16, 'Percentage of difference to be added to the contract price', of schedule 1 – which in this example is 5 per cent – is added to the contract price. Where, on the other hand, the cost of performance is less than the provisional sum, the *net* difference is deducted from the contract price.

EXAMPLE 9.7
SCHEDULE OF ADJUSTMENTS OF PROVISIONAL SUMS (MW-1)

SCHEDULE E – ADJUSTMENT OF PROVISIONAL SUMS

Item	*Subcontract sum*	*Provisional sum*	*Increase*
	$	$	$
Electrical installations	177 000	180 000	0
Mechanical installations	152 000	140 000	12 000
Landscaping	25 000	30 000	0
Subtotal			12 000
Add Item 16, schedule 1: percentage of the difference to be added to the contract price		5%	600
Adjustment of provisional sums			12 600

Example 9.8 is a simplified schedule of adjustments to the contract price for the difference between the prime cost sums for materials and goods to be supplied by the contractor and the cost of supply of the materials and goods.

As we saw in Chapter 5, where the cost of supply is greater than the prime cost sum, the difference, together with the percentage

stated in item 16, 'Percentage of difference to be added to the contract price', of schedule 1, is added to the contract price. Where, on the other hand, the cost of supply is less than the provisional sum, the *net* difference is deducted from the contract price.

EXAMPLE 9.8
SCHEDULE OF ADJUSTMENTS OF PRIME COST SUMS (MW-1)

SCHEDULE E – ADJUSTMENT OF PRIME COST SUMS

Item	*Cost of supply*	*Prime cost sum*	*Increase*
	$	$	$
Supply of windows	92 000	85 000	7 000
Supply of hardware	19 000	15 000	4 000
Subtotal			11 000
Add Item 16, schedule 1: percentage of the difference to be added to contract price		5%	550
Adjustment of prime cost sums			11 550

Example 9.9 is a simplified schedule of all contract price adjustments other than those previously scheduled.

EXAMPLE 9.9
SCHEDULE OF OTHER CONTRACT PRICE ADJUSTMENTS (MW-1)

SCHEDULE G – OTHER CONTRACT PRICE ADJUSTMENTS	$
Conditions on site	10 000
Facilities for separate contractor	5 000
Increased authority fee	1 000
Work to adjoining property	4 000
Total other contract price adjustments	20 000

Example 9.10 is a simplified schedule of progress certificates, excluding GST, issued throughout the currency of the contract.

EXAMPLE 9.10
SCHEDULE OF PROGRESS CERTIFICATES (MW-1)

SCHEDULE H – PROGRESS CERTIFICATES (excluding GST)	$
Progress certificate 1	49 000
Progress certificate 2	84 000
Progress certificate 3	116 000
Progress certificate 4	121 000
Progress certificate 5	160 000
Progress certificate 6	140 000
Progress certificate 7	138 000
Progress certificate 8	132 000
Progress certificate 9	104 000
Progress certificate 10	76 000
Progress certificate 11	30 000
Total previously certified excluding GST	1 150 000

AS4000: subclause 37.4

The Contractor must lodge a final payment claim, endorsed 'FINAL PAYMENT CLAIM', within 28 days of the end of the last defects liability period to expire (where the Works have been divided into separable portions or there is a separate defects liability period for rectification work). The claim must include all outstanding claims under the contract (*subclause 37.4*). That is, any potential claim by the Contractor against the Principal which is not made during the period for lodgment will be barred.

Example 9.11 is a simplified proposed method of presenting a Contractor's final payment claim under AS4000, submitted to the Superintendent on the designated date. As is the case with MW-1, the format of the final payment claim is rather different from that used in the presentation of progress claims in Chapter 8. It, too, consists of a letter submitting the claim, a single page summary of the details and then the details themselves, which are presented separately, section by section, in substantiation of the claim.

Note the comments made earlier, when discussing final claims under MW-1, in regard to the difference in format between progress and final claims. Note also that since, unlike progress claims, the project is now 100 per cent complete, a progressive valuation would be quite redundant.

EXAMPLE 9.11
CONTRACTOR'S FINAL PAYMENT CLAIM (AS4000)

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

1 August 200X

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

FINAL PAYMENT CLAIM

Pursuant to subclause 37.4, 'Final payment claim and certificate', of the Contract, we hereby submit for your approval our final payment claim on the abovenamed project:

Final Payment Claim: $23 280

The calculations supporting this claim are attached to facilitate the preparation of your final certificate, which we anticipate receiving within a further *nn* days, this being 42 days after the expiry of the last defects liability period, also in accordance with subclause 37.4 of the Contract.

Yours faithfully

Blitzkrieg Constructions Pty Ltd
(The Contractor)
att

Example 9.12 is a simplified proposed method of presenting the summary of calculations supporting the Contractor's final payment claim. This summary shows a single line item for each separate component of the claim, the details of which are shown in one of the accompanying schedules. (Note that the coding of schedules by a capital letter bears no relationship to the similar coding in the earlier MW-1 example.)

EXAMPLE 9.12
SUMMARY OF CALCULATIONS SUPPORTING CONTRACTOR'S FINAL PAYMENT CLAIM (AS4000)

FINAL PAYMENT CLAIM	$
Contractor's work [*as per bill of quantities, if applicable*] (schedule A)	660 000
Variations approved (schedule B)	68 030
Work under provisional sums (schedule C)	425 250
Other contract payments (schedule D)	20 000
Total value of work	1 173 280
Less Progress certificates (schedule E)	1 150 000
Final payment claim	23 280

Examples 9.13 to 9.17, which follow, are simplified proposed methods of presenting schedules of the various components of a Contractor's final payment claim under AS4000 as summarised in Example 9.12.

Example 9.13 is a simplified example of a schedule of the Contractor's work, showing the contract value of each trade, including any work carried out under a provisional sum by the Contractor (see Chapter 5). Work carried out under a provisional sum by a subcontractor is shown in a separate schedule.

EXAMPLE 9.13
SCHEDULE OF CONTRACTOR'S WORK (AS4000)

SCHEDULE A – CONTRACTOR'S WORK [*as per bill of quantities, if applicable*]	$
Preliminaries	64 000
Groundworks	58 000
Concrete	89 000
Masonry	67 000
Structural steel	52 000
Metalwork	39 000
Woodwork	51 000
Hardware	10 000
Roofing	54 000
Windows	30 000
Doors	32 000
Finishes	31 000
Painting	28 000
Hydraulics	32 000
Drainage	23 000
Total contractor's work	660 000

Example 9.14 is a simplified schedule of variations approved.

EXAMPLE 9.14
SCHEDULE OF VARIATIONS APPROVED (AS4000)

SCHEDULE B – VARIATIONS APPROVED		$
V1	Column footings	2 700
V2	Doors	6 200
V3	Steel beams	–3 900
V4	Electrical switchboards *	8 400
V5	Aluminium handrails	700
V6	Airconditioning ducts *	12 600
V7	Brick partitions	1 300
V8	Revisions to roofing and gutters	10 900
V9	Stainless steel eaves beams	8 700
V10	Revisions to ceiling finishes	–1 200
V11	Revisions to light fittings *	1 680
V12	Additional cable trays *	3 990
V13	Revisions to fences and gates *	4 410
V14	Revisions to thermostats *	6 720
V15	Revisions to air registers *	4 830
Total variations approved		68 030

Note that, as in the earlier MW-1 example, *all* variations are grouped together, irrespective of whether they are carried out by the contractor or by a subcontractor, and irrespective of whether or not they are carried out under a provisional sum. For simplicity, it has been assumed that each variation carried out by the Contractor, or by a subcontractor where no provisional sum is involved, has been valued at bill of quantities rates and does not, therefore, attract any adjustment to its basic value. Consequently, its value will differ from that of its counterpart under MW-1 by the allowance of 8 per cent in the MW-1 example.

As we saw in Chapter 6, the percentage stated in item 12, 'Provisional sums, percentage for profit and attendance', of annexure part A is added to the basic value of each variation carried out under a provisional sum by a subcontractor (marked *). Consequently, its value will differ from that of its counterpart under MW-1 by the difference between the allowance in item 12 which, in this example, is 5 per cent and the allowance of 8 per cent in the MW-1 example.

Example 9.15 is a simplified schedule of work for which provisional sums were allowed in the Contract and which was carried out or supplied by a subcontractor and *not* by the Contractor.

EXAMPLE 9.15
SCHEDULE OF WORK CARRIED OUT OR SUPPLIED UNDER PROVISIONAL SUMS (AS4000)

SCHEDULE C – WORK UNDER PROVISIONAL SUMS	$
Subcontract:	
Electrical installations	177 000
Mechanical installations	152 000
Landscaping	25 000
Supply of windows	32 000
Supply of hardware	19 000
Total as per subcontract	405 000
Add Item 12, annexure part A: provisional sum percentage for profit and attendance (5%)	20 250
Total work under provisional sums	425 250

As we saw in Chapter 5, the percentage stated in item 12, 'Provisional sums, percentage for profit and attendance', of annexure part A is added to the amount payable to the subcontractor in accordance with the subcontract. Since it has been assumed in *both* examples that an identical allowance of 5 per cent for attendance and profit has been made in the tender, there will be no difference between the value of this work and its counterpart under MW-1 so long as the cost of the work *does not* exceed the provisional sum.

When the cost of the work *does* exceed the provisional sum, the value of the excess will differ from that of its counterpart under MW-1 by the difference between the allowance in item 12 of annexure part A and the allowance in item 16 of schedule 1 in the MW-1 example. However, this makes no practical difference, since both these allowances are in this instance 5 per cent.

Example 9.16 is a simplified schedule of all contract payments other than those previously scheduled.

EXAMPLE 9.16
SCHEDULE OF OTHER CONTRACT PAYMENTS (AS4000)

SCHEDULE D – OTHER CONTRACT PAYMENTS	$
Conditions on site	10 000
Facilities for separate contractor	5 000
Increased authority fee	1 000
Work to adjoining property	4 000
Total other contract payments	20 000

Example 9.17 is a simplified schedule of progress certificates issued throughout the currency of the Contract.

EXAMPLE 9.17
SCHEDULE OF PROGRESS CERTIFICATES (AS4000)

SCHEDULE E – PROGRESS CERTIFICATES	$
Progress certificate 1	49 000
Progress certificate 2	84 000
Progress certificate 3	116 000
Progress certificate 4	121 000
Progress certificate 5	160 000
Progress certificate 6	140 000
Progress certificate 7	138 000
Progress certificate 8	132 000
Progress certificate 9	104 000
Progress certificate 10	76 000
Progress certificate 11	30 000
Total previously certified	1 150 000

Final certificate

Like the contractor's final claim, the final certificate in a building and construction contract is final in the sense that it is the last of the series of certificates issued by the contract administrator to the contractor. However, the contractor having declared that it will not make any further claim under the contract, it is also final in the additional sense that the amount of this certificate is expected to be the final amount payable by the owner to the contractor under the contract.

The contract administrator is required to issue a final certificate to the contractor after receiving the final claim. The certificate is required to show the final amount payable either to the contractor or to the owner, including the balance of the retention moneys with all interest accrued since practical completion. The contract administrator may also issue a final certificate even though the contractor has *not* submitted a final claim or followed other mandatory contractual procedures. This ensures that time is not set at large and also prevents the contractor from blocking the issue of a final certificate which would require a payment to the owner. MW-1 also requires the contract administrator to provide the contractor with details of any difference between the amount certified and the amount claimed.

By contrast, there is no dedicated contractual procedure that the contractor may follow in the event that the contract administrator fails to issue a final certificate which would require a payment by the owner to the contractor, or the owner blocks the issue of or fails to honour such a certificate. In this unlikely event, the contractor has three options, listed here in ascending order of firepower:

1. to seek a court injunction that will oblige the owner either to instruct the contract administrator to issue a final certificate, or to appoint a contract administrator who will then do so
2. to seek payment and damages, plus interest where applicable, through the dispute resolution procedures of the contract;
3. to accept the owner's actions as repudiation of the contract and seek reimbursement on the basis of *quantum meruit* (literally, 'as much as it – the work done – may be worth'). This would require the owner to pay to the contractor, after deducting payments already made, the actual cost of executing the entire works, plus a reasonable percentage for profit. (From the owner's point of view, all ethical considerations aside, this is a situation strenuously to be avoided, particularly in competitive market conditions.)

Unless either the owner or the contractor serves on the other a notice of dispute within the prescribed period after the issue of the final certificate, the issue of that certificate will be taken as evidence in dispute resolution of approval and acceptance of finality in terms of *all* contractual matters, including quality and cost, on the part of both the owner or the contractor. This, it must be clearly understood, specifically excludes honest errors in the certificate, outright dishonesty by either party, and any defect that could not be observed at the end of either defects liability period.

MW-1: clauses N11 and N14

The architect must promptly assess the final claim and may request the contractor for further information which it reasonably needs,

which the contractor must then promptly provide. The architect must issue to the contractor and the owner a final certificate, showing the amount due for payment, within ten business days after receiving the final claim or any further information subsequently requested (*subclause N11.1*).

The final certificate (*subclause N11.2*) must:

- state the amount of GST included
- gives reasons for any difference between the net amount claimed and the net amount certified
- notify the owner that it must release any remaining security.

If the contractor fails to provide within a reasonable time any further information that the architect has requested, the architect must promptly assess the final claim on the basis of the information that has been provided (*subclause N11.3*).

Where the owner has terminated the engagement of the contractor for default or insolvency, the certificate issued after completion following termination (see Chapter 4) replaces the final certificate which would have been issued had normal completion of the project taken place (*subclause N11.4*).

The final certificate must also state the architect's assessment of all entitlements (to both parties) under the contract (*clause N14*).

The final certificate is evidence:

- of both parties' entitlements under the contract
- that the contractor has fulfilled its obligations under the contract.

Example 9.18 is a simplified proposed method of presenting an architect's final certificate under MW-1, issued after checking the contractor's final claim.

EXAMPLE 9.18
ARCHITECT'S FINAL CERTIFICATE (MW-1)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

22 August 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to clause N11, 'Final certificate – procedure for architect', of the contract, we hereby certify that the following amount is due to you for final payment on the abovenamed project:

Final Certificate: $32 762

We also notify you that the owner is now obliged under clause C9, 'Release of security on final certificate', of the contract to release any remaining security.

The calculations supporting this certificate are attached for your information, as are the particulars of the difference between your claim and the certificate as required by clause N11.

Yours faithfully

Bossie, Boots Pty Ltd
(The architect)
att

Example 9.19 is a simplified proposed method for presenting the summary of calculations supporting the architect's final certificate under MW-1, issued after checking the contractor's formal final claim. This example is in a similar summary format to the contractor's final claim shown earlier.

Note, however, a small but significant difference in approach to the tabulation of the summary: whereas the claim is concerned with the value of work done, the certificate is focused *exclusively* on the contract price and any adjustments. This format is often referred to as 'the final account', being the architect's final report to the owner of the architect's stewardship of the project and the owner's project budget.

Note also that the schedules used in this example are, with one exception (schedule D1), those used in the example of the contractor's final claim, shown in Examples 9.3 to 9.10.

EXAMPLE 9.19
SUMMARY OF ARCHITECT'S FINAL CERTIFICATE (MW-1)

FINAL CERTIFICATE	$
Initial contract price	1 069 500
Add Adjustments to contract price:	
Variations approved (schedule D1)	69 112
Adjustment of provisional sums (schedule E)	12 600
Adjustment of prime cost sums (schedule F)	11 550
Other adjustments to the contract price (schedule G)	20 000
Total adjustments to contract price	113 262
Adjusted contract price	1 182 762
Less Progress certificates (schedule H)	1 150 000
Final certificate	32 762

Example 9.20 is a simplified schedule of all variations approved under the contract. It is the architect's version of the contractor's corresponding schedule (Example 9.6), in which the architect purports to have discovered errors.

EXAMPLE 9.20
ARCHITECT'S SCHEDULE OF VARIATIONS APPROVED (MW-1)

SCHEDULE D1 – VARIATIONS APPROVED		$
V1	Column footings	2 916
V2	Doors	5 600
V3	Steel beams	–4 212
V4	Electrical switchboards	8 640
V5	Aluminium handrails	756
V6	Airconditioning ducts	12 960
V7	Brick partitions	1 404
V8	Revisions to roofing and gutters	10 700
V9	Stainless steel eaves beams	9 396
V10	Revisions to ceiling finishes	–1 296
V11	Revisions to light fittings	1 728
V12	Additional cable trays	4 104
V13	Revisions to fences and gates	4 536
V14	Revisions to thermostats	6 912
V15	Revisions to air registers	4 968
Total variations approved		69 112

Example 9.21 is a simplified format for the reasons provided by the architect for the difference between the amount claimed by the contractor and the amount later certified for payment.

EXAMPLE 9.21
ARCHITECT'S REASONS FOR DIFFERENCE BETWEEN FINAL CERTIFICATE AND FINAL CLAIM (MW-1)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

22 August 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

Pursuant to clause N11, 'Final certificate – procedure for architect', of the contract, we advise the following differences between your final claim and the final certificate:

1 Variation 2 is claimed as $6696, whereas our records show a valuation of $5600: a reduction of $1096.
2 Variation 8 is claimed as $11 772, whereas our records show a valuation of $10 700: a reduction of $1072.
3 Your final claim is shown as $35 130, whereas the certificate is for $32 962: a reduction of $2168.

Your final claim and the final certificate are reconciled as follows:

Final claim: $34 930

	Deduct $	*Add* $	*Difference* $
Item 1	6 696	5 600	–1 096
Item 2	11 772	10 700	–1 072
Net difference			–2 168
Final certificate			32 762

Yours faithfully

Bossie, Boots Pty Ltd
(The architect)

AS4000: clause 37

Within 42 days after the expiry of the last defects liability period – and regardless of whether the Contractor has submitted a final payment claim – the Superintendent must issue to the Contractor and the Principal a final certificate, certifying the final amount due to the Contractor from the Principal or from the Principal to the Contractor under the Contract.

(This prevents the Contractor from blocking the issue of a final certificate which would require a payment by the Contractor to the Principal.)

The moneys certified as due must be paid within seven days after receipt of the final certificate.

The final certificate is conclusive evidence of accord and satisfaction (with the outcome of the Contract) and that all obligations under the Contract have been fulfilled (*subclause 37.4*), except for:

- **fraud or dishonesty relating to the work under the Contract or anything in the final certificate**
- **any defect or omission which was not apparent at the end of the last defects liability period or which would not have been disclosed by reasonable inspection at the time of issue of the final certificate**
- **any error in any computation; or**
- **any outstanding matter which is the subject of a notice of dispute (see Chapter 4) served before the seventh day after the issue of the final certificate.**

Example 9.22 is a simplified proposed method of presenting a Superintendent's final certificate under AS4000, issued after checking the Contractor's final payment claim.

Note that, unlike progress certificates, the Superintendent is not required to set out either the calculations used or the reasons for any difference between the certificate and the Contractor's claim. Nevertheless, since not to do so would in most instances risk being interpreted as being unnecessarily provocative and confrontational, both the calculations and the reasons are shown in the example.

EXAMPLE 9.22
SUPERINTENDENT'S FINAL CERTIFICATE (AS4000)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

15 August 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong, Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

FINAL CERTIFICATE

Pursuant to subclause 37.4, 'Final payment claim and certificate', of the Contract, we hereby certify that the following is the final amount due to you for payment on the abovenamed project:

Final Certificate: $21 280

The calculations supporting this certificate are attached for your information as are the particulars of the difference between your final payment claim and the final certificate.

Yours faithfully

Bossie, Boots Pty Ltd
(The Superintendent)
att

Example 9.23 is a simplified proposed method of presenting the summary of calculations supporting the Superintendent's final certificate under AS4000, issued after checking the Contractor's final payment claim. This example is in a similar summary format to the Contractor's final payment claim shown earlier.

Note, however, as in the previous example under MW-1, the difference in approach to the tabulation of the summary. Note also that the schedules used in this example are, with one exception (schedule B1), those used in the example of the Contractor's final payment claim, shown in Examples 9.13 to 9.17.

EXAMPLE 9.23
SUMMARY OF SUPERINTENDENT'S FINAL CERTIFICATE (AS4000)

FINAL CERTIFICATE	$
Initial contract sum	1 069 500
Adjustments to contract sum:	
Variations approved (schedule B1)	66 030
Adjustment of provisional sums (schedule F)	15 750
Other contract payments (schedule D)	20 000
Total adjustments to contract sum	101 780
Adjusted contract sum	1 171 280
Less Progress certificates (schedule E)	1 150 000
Final certificate	21 280

Example 9.24 is a simplified schedule of all variations approved under the Contract. It is the Superintendent's version of the Contractor's corresponding schedule (Example 9.14), in which the Superintendent purports to have discovered errors.

EXAMPLE 9.24
SUPERINTENDENT'S SCHEDULE OF VARIATIONS APPROVED (AS4000)

SCHEDULE B1 – VARIATIONS APPROVED		$
V1	Column footings	2 700
V2	Doors	5 200
V3	Steel beams	–3 900
V4	Electrical switchboards	8 400
V5	Aluminium handrails	700
V6	Airconditioning ducts	12 600
V7	Brick partitions	1 300
V8	Revisions to roofing and gutters	9 900
V9	Stainless steel eaves beams	8 700
V10	Revisions to ceiling finishes	–1 200
V11	Revisions to light fittings	1 680
V12	Additional cable trays	3 990
V13	Revisions to fences and gates	4 410
V14	Revisions to thermostats	6 720
V15	Revisions to air registers	4 830
Total variations approved		66 030

Example 9.25 is a simplified schedule of the adjustment of all provisional sums.

EXAMPLE 9.25
SCHEDULE OF PROVISIONAL SUMS (AS4000)

SCHEDULE F – ADJUSTMENT OF PROVISIONAL SUMS

Item	*Cost of work*	*Provisional sum*	*Increase*
	$	$	$
Electrical installations	177 000	180 000	–3 000
Mechanical installations	152 000	140 000	12 000
Landscaping	25 000	30 000	–5 000
Supply of windows	32 000	25 000	7 000
Supply of hardware	19 000	15 000	4 000
Total	405 000	390 000	15 000
Net increase			15 000
Add Item 12, annexure part A: provisional sum percentage for profit and attendance		5%	750
Total adjustment of provisional sums			15 750

Example 9.26 is a simplified format for the reasons provided by the Superintendent for the difference between the amount claimed by the Contractor and the amount later certified for payment.

EXAMPLE 9.26
SUPERINTENDENT'S REASONS FOR DIFFERENCE BETWEEN FINAL CERTIFICATE AND FINAL PAYMENT CLAIM (AS4000)

Bossie, Boots Pty Ltd
Architects and Engineers
99 Design Boulevard
Malvern, Vic 3144

22 August 200X

Blitzkrieg Constructions Pty Ltd
1058 Congested Highway
Dandenong Vic 3175

Dear Sirs

RE: MEGABUCKS OFFICE COMPLEX, SOUTH MELBOURNE

We hereby advise the following differences between your final payment claim and the final certificate:

1 Variation 2 is claimed as $6200, whereas our records show a valuation of $5200: a reduction of $1000.
2 Variation 8 is claimed as $10 900, whereas our records show a valuation of $9900: a reduction of $1000.
3 Your final claim is shown as $23 280, whereas our certificate is for $21 280: a reduction of $2000.

Your final payment claim and the final certificate are reconciled as follows:

Final payment claim $23 280

	Deduct $	*Add* $	*Difference* $
Item 1	6 200	5 200	−1 000
Item 2	10 900	9 900	−1 000
Net difference			−2 000
Final certificate			$21 280

Yours faithfully

Bossie, Boots Pty Ltd
(The Superintendent)

Final payment

Like the contractor's final claim and the contract administrator's final certificate, the final payment in a building and construction contract is final in the sense that it is the last of the series of payments made by the owner to the contractor. However, the contractor having declared that it will not make any further claim under the contract, it is also final in that it is expected to be the final amount required to be paid by the owner to the contractor under the contract.

The final amount is required to be paid by either the owner or the contractor to the other after presentation for payment of the final certificate. The amount of the final certificate may be the subject of a notice of dispute by either party.

Some contracts, notably AS2124, require the owner to pay to the contractor the full amount of the final claim if the contract administrator does not issue a final certificate in accordance with mandatory contractual procedures. This provision prevents the owner from avoiding a payment, either by preventing the contract administrator from issuing a certificate or by dismissing the contract administrator before a certificate can be issued.

In both MW-1 and AS4000, if either the owner or the contractor does not make the final payment within the prescribed period, then the defaulting payer becomes liable to pay interest at the prescribed rate on the amount outstanding. MW-1 also requires any interest unpaid by the due date to be 'capitalised' (that is, compounded) monthly.

AS4000 allows the owner at this stage to recover from the contractor debts arising from matters unrelated to the contract, such as amounts owing under *other* contracts.

MW-1: clauses N12–N13 and N15

The party to be paid – usually the contractor – must prepare a tax invoice (if the party is registered for GST) for the amount of the final certificate and present both the certificate and the invoice to the other party for payment (*clause N12*). Note that an owner which is not engaged in any commercial activity would not be required to be registered for the GST and would therefore neither need nor be entitled to claim an input credit, for which a tax invoice is mandatory.

The party to make payment – usually the owner – must pay the amount of the final certificate within the period stated in item 4, 'Period for payment of certificates, or release of security', of schedule 1; or, if nothing is stated, seven calendar days, after presentation of the final certificate and the tax invoice (again, if applicable) by the other party (*clause N13*).

As we saw in Chapter 8, each party must pay interest on payments it has failed to make by the due time (*subclause N15.1*).

The rate of interest is stated in item 27, 'Interest rate on overdue amounts', of schedule 1; or, if nothing is stated, 10 per cent per annum (*subclause N15.2*).

The interest must be calculated daily from the due date for payment. Interest must be paid on the last day of each month. Interest due but unpaid on that day must be immediately capitalised and added to the amount outstanding (*clause N15.3*). Thus interest is charged on unpaid interest and the penalty for late payment is compounded.

AS4000: subclauses 37.4 and 37.5–37.6

As we saw in Chapter 8, the payment of a progress certificate does not constitute evidence that any work under the Contract has been carried out satisfactorily (*subclause 37.2*). In the absence of any statement as to the corresponding status of the final certificate, the inescapable implication of this provision is that payment of the final certificate most certainly *does* constitute such evidence.

The Principal or the Contractor must pay to the other the amount of the final certificate within seven days after receiving the certificate (*subclause 37.4*).

As we also saw in Chapter 8, the interest rate on overdue payment is stated in item 30, 'Interest rate on overdue payments', of annexure part A; or, if nothing is stated, 18 per cent per annum from the due date for payment (*subclause 37.5*).

As we also saw in Chapter 8, the Principal may deduct from a payment to the Contractor any money due from the Contractor other than under the Contract (*subclause 37.6*) – that is, from another contract.

Security and retention moneys

As we saw earlier under 'Practical completion', security and retention moneys provided by the contractor to the owner are reduced at practical completion by a proportion, usually half, which is stated in the contract, as is security provided by the owner.

The balance of security or retention provided by the contractor and of any security provided by the owner is released within a prescribed period after the final certificate is either issued (AS4000) or presented for payment (MW-1) or after the final payment is made, as the case may require. At this time, all accrued interest is paid to the party entitled to receive it.

MW-1: clause C9

Upon issue, for a separable part or the whole of the works, of either the final certificate or the certificate issued in lieu of a final certificate

following termination by the owner, the owner must release to the contractor the balance of the security then held, less any amount due to the owner under the certificate (*subclause C9.1*).

If security is by cash retention, the architect must include in the final certificate the balance of the security then held (*subclause C9.2*). Note that this will occur automatically, if the starting point of the final certificate is the adjusted contract price less progress certificates.

If security is by unconditional guarantees, and the certificate is for payment to the contractor, the owner must return to the contractor the remaining guarantee within the period (after presentation of the certificate and the tax invoice) stated in item 4, 'Period for payment of certificates, or release of security', of schedule 1; or, if nothing is stated, within seven calendar days. If the certificate is for payment to the owner, the certificate is evidence of the owner's entitlement and, if the contractor fails to pay the amount certified within the period for payment stated in item 4 of schedule 1; or, if nothing is stated, seven calendar days, the owner may draw on – that is, take possession of – the security provided by the contractor (*subclause C9.3*).

AS4000: clause 4 and subclause 5.4

As we saw in Chapter 1, where the Works are divided into separable portions, the Superintendent must identify for each separable portion the amount of security to be released at final certificate (*clause 4*). Thus the Principal must release the relevant security for each separable portion of the Works as and when its final certificate is issued.

As we saw earlier under 'Reduction and release', each party's entitlement to all security ceases 14 days after the issue of the final certificate.

When a party's entitlement to any security ceases, that party must immediately release and return the security to the other party (*subclause 5.4*).

Payment of workers and subcontractors

As we saw in Chapter 8, building and construction contracts provide varying degrees of protection for payments required to be made to companies and persons who are not parties to the contract. We also saw that the level of protection accorded to payments due to the various categories of companies and persons may be quite uneven, both within each contract and between different contracts.

Some contracts, notably the JCC series, fully protect payments only to *nominated* subcontractors and to the *contractor's* workers, while completely ignoring payments to *domestic* subcontractors and to *subcontractors'* workers, none of whom is in a contractual

relationship with the contractor. Other contracts, notably AS2124, fully protect payments to *all* subcontractors and to *all* workers, in that the owner may withhold final payment to the contractor until a required declaration or evidence is provided or, failing that, until a court order is made for payment to a subcontractor or a worker.

AS4000 allows the owner, unless the owner is aware that the contractor is involved in insolvency proceedings, to pay directly to the contractor's workers and subcontractors, *and* to its subcontractors' workers, any moneys payable to them relating to the contract but remaining unpaid. The owner's right to make these payments is conditional upon the contractor having requested, or a court having ordered, that the payments be made. Such payments are treated as a part payment of the certificate in which the moneys were certified.

So in summary, AS4000 fully protects payments to *all* subcontractors and to *all* workers, except in the event of the contractor's insolvency, when payment (in full or in part) will be made to them in the statutory order of priority and in accordance with the funds available to the receiver.

MW-1 has no provision for protecting payments to subcontractors or workers at final certificate.

AS4000: subclause 38.3

Unless the Principal knows that the Contractor is in the process of being wound up (see Chapter 4), the Principal may pay any unpaid moneys relating to the work under the Contract, which are due and payable to:

- **the Contractor's workers**
- **the subcontractors' workers**
- **the subcontractors**

directly to a worker or a subcontractor before final payment where such payment is:

- **permitted by law**
- **subject of a court order; or**
- **requested by the Contractor.**

Any such payment by the Principal, and any payment by the Principal to a worker or a subcontractor under a legislative requirement, is deemed to be a part-payment to the Contractor of either a progress certificate or of the final certificate (*subclause 38.3*). Since it is unclear in what conceivable circumstances such payment would *not* be permitted by law, the conclusion may be drawn that this qualification exists *just in case* such circumstances should ever arise.

REVIEW

The completion of a project is the culmination of the efforts of a large team of individuals and firms: owner, consultants, contractor, subcontractors, suppliers, and the employees of all of these. It occurs when all contractual obligations are finally fulfilled and all administrative loose ends are tied up.

The process of completion is divided into three stages:

1 **practical completion**
2 **defects liability period**
3 **final claim, certificate and payment.**

Practical completion is the stage at which the works are ready for occupation and use by the owner. Minor work may still remain to be done by the contractor, but this is of a scale and nature that does not interfere with the owner's effective use of the works. The contractor notifies the contract administrator that, in its opinion, the works have reached or will shortly reach practical completion. Upon issue by the contract administrator of a notice or certificate of practical completion, the owner takes possession of the works and assumes full responsibility for them, with the exception of any outstanding minor works and the rectification of defects. These remain the responsibility of the contractor. A proportion, usually half, of security and retention moneys is returned to the contractor at this stage.

In the event of late practical completion of the works, the contractor is liable to pay liquidated damages to the owner. These are compensation for the pre-estimated cost to the owner of delayed occupation and use of the works.

The defects liability period separates practical completion from completion of the project. The contractor must complete any remaining minor works during this period. It is also the period during which potential defects in the works are allowed to 'mature', as it were, and to become evident. The contractor is liable for the rectification of any defect that becomes evident during this period and is required to rectify any such defect either during the period or as soon as possible after the expiry of the period.

The final claim for all moneys due to the contractor is lodged by the contractor with the contract administrator when all work, including rectification of defects, has been completed and all of the contractor's contractual obligations have been discharged. It is followed first by the contract administrator's final certificate, which confirms that such is indeed the case, and then by the final payment by the owner. At this stage, the balance of security is returned to the

contractor or to the owner, as the case may be, thus completing all contractual obligations of both parties and confirming the completion of the project.

REFERENCES

ABIC MW-1 2003 *major works contract*:

- section C, 'Security' (clauses C7 to C9)
- section D, 'Liability' (clauses D3 to D6)
- section M, 'Completion of the works' (whole section)
- section N, 'Payment for the works' (clauses N10 to N15)
- schedule 1, 'Contract information'
- schedule 2, 'Special conditions'.

AS4000 – 1997 *General conditions of contract*:

- clause 1, 'Interpretation and construction of contract'
- clause 4, 'Separable portions' (whole clause)
- clause 5, 'Security' (subclause 5.4)
- clause 29, 'Quality' (subclause 29.4)
- clause 34, 'Time and progress' (subclauses 34.7 and 34.8)
- clause 35, 'Defects liability' (whole clause)
- clause 37, 'Payment' (subclauses 37.2 and 37.4 to 37.6)
- clause 38, 'Payment of workers and subcontractors' (subclause 38.3)
- annexure part A.

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- chapter 15, 'Completion, defects and final account'.

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- chapter 13, 'Final accounts'

REVIEW QUESTIONS

9.1 Explain the significance of practical completion and deemed practical completion under the contracts studied.

9.2 Describe the standard procedure according to which routine practical completion is administered under the contracts studied.

9.3 What are the reasons for reducing the retention and other security

held at practical completion? Explain the financial advantages to an owner of a contract that contains such provisions.

9.4 Explain the standard procedure according to which security and retention moneys are routinely administered at practical completion and at final payment under the contracts studied.

9.5 Explain the purpose and limitations of liquidated damages.

9.6 Explain the reasons for and significance of the defects liability period.

9.7 Describe the standard procedure according to which routine final claim, final certificate and final payment are administered under the contracts studied.

INTRODUCTION

This book is about the basics of administering building and construction projects in accordance with their respective conditions of contract.

The issues dealt with by different building and construction contracts are generally constant, since most building and construction projects tend to face the same problems. In spite of the extent of this commonality, a particular contract also tends to be organised in an idiosyncratic sequence which is largely dependent upon the mindset of the individual or panel that drafted it. The two standard contracts referred to here are no exception to this rule.

The first edition of *Construction Contract Administration* was developed from an off-campus study guide, written by the author. It was produced as part of the course materials for units offered by the School of Architecture and Building at Deakin University in a series of postgraduate studies in architecture and building.

This second edition has been written to fill the need created when the building and construction industry published and adopted new major standard contracts. These superseded the two contracts around which the first edition was constructed. While this book accommodates the change in associated documents, in all other ways it remains essentially unchanged in its structure and approach.

These new contracts are:

- ABIC MW-1 2003 *major works contract*, The Royal Australian Institute of Architects and Master Builders Australia Incorporated
- AS4000 1997 *General conditions of contract*, Standards Association of Australia.

The reader is encouraged to obtain a copy of these documents and to scan through the relevant clauses, which are listed as references, before commencing each chapter.

The text has been organised in a sequence which will help the reader to study building and construction contracts in a logical and, indeed, a chronological order – in the sense that some topics are best studied and mastered before or, alternatively, after others. This sequence represents a view of the order in which the various aspects of a contract need to be understood. It happens also to be largely the order in which these same aspects need to be applied in practice to

the administration of a 'live' contract. The common sequence will also help the simultaneous study of the two standard contracts, which are organised in two very different ways.

To this end, the text is divided into four main parts. Part 1, 'The contractual background', covers the conditions of contract and allocation of risk in building and construction projects (Chapters 1 and 2). Part 2, 'Administration and disputes', details the management of quality and consensus in a project (Chapters 3 and 4). Part 3, 'Changes in project parameters', describes the management of events that vary the scope, time and cost of a project (Chapters 5 to 7). Part 4, 'Payments and project completion', discusses the management of payments to the contractor, and of the final stages of the project (Chapters 8 and 9).

Each chapter opens with an overview of its general subject area, which is divided into a number of related but discrete topics. Each of these, in turn, commences with a more detailed overview of the topic, which summarises the logic behind the procedures prescribed by most building and construction contracts. In other words, it looks at why things *need* to be done (what will happen if you don't), rather than simply *why* things are done (because clause 11 says you must), and then *how* they are done.

The overview also discusses any difference in approach between the two standard contracts referred to in the text. This is followed by a practical, non-legal interpretation in plain English of the principal relevant clauses, including all embedded cross-references, of the two standard contracts. This interpretation is more readily comprehensible to the reader without a legal background than are the base documents. Editorial comment within an interpretation is also added.

Each chapter closes with a review of the general subject area, and a list of references that includes all the relevant clauses of the two contracts as well as some further reading. This is followed by a list of review questions, so the reader can check independently his or her level of understanding of the chapter.

The reader is cautioned that, while the references published in the UK are highly relevant in terms of their explanations of the general principles of construction contract administration, they are written in the context of the *JCT Standard Form of Building Contract*, which is the dominant standard conditions of building contract in the UK. It tends to differ somewhat in its detail from its Australian equivalents.

This is an introductory text in construction contract administration. It presents the range of contractual information of which architects, engineers, builders, construction contractors and quantity surveyors need to be aware when they are engaged in building and construction projects. It is *not* intended as a comprehensive manual

for the total management and administration of a project, but rather as an explanation of the principles and rationale underlying its administration in accordance with, and only to the extent prescribed by, the applicable contract.

It is assumed that the reader is either a practitioner or a student of one of the building and construction professions. It is consequently also assumed that the reader is broadly aware of the operations and workings of design and construction teams, and of the documentation that is created on small, medium and large building and construction projects.

Regardless of his or her professional discipline, the reader will have good reason to become conversant with the general administration, if not the detailed outworkings, of building and construction contracts. Architects, engineers or quantity surveyors may be called upon to advise clients or members of a design team on the practical implications of proposed contractual arrangements for the contract administration of a project; they may also be called upon to administer the financial aspects of a project on behalf of the owner. Building and construction contractors, too, may be called upon to advise on such matters, or to administer the financial aspects of a project on their own behalf or that of their employer. Finally, students and other readers who are not directly involved in contract administration at present will, nevertheless, need to appreciate the complexities of building and construction contracts to become truly effective in their chosen profession.

The primary aim of this text is to give the reader the knowledge to operate as a building and construction professional in the area of management and administration of projects, in accordance with the applicable contract.

The objectives of this text are to give the reader:

- a broad understanding of the rights and responsibilities of the parties to a building and construction contract
- a general knowledge of the mandatory contractual procedures for administering project scope, quality, cost and time
- a basis upon which to build practical working skills in all areas of contract administration during the construction phase of a project.

The reader should note, however, that the explanatory notes which relate to the various contract clauses are no substitute for a full reading of the contract documents themselves, supplemented by selected reading.

The two standard contracts use different terms for the parties to the contract, other persons and companies involved, and documents

used. In order to avoid not only confusion, but also any inference that either of the two contracts may be prefered over the other, the terminology of *either* contract has been avoided wherever possible, except when referring specifically to that contract. Instead, this text uses generic terms, for instance:

Generic	*MW-1*	*AS4000*
owner	owner	Principal
contractor	contractor	Contractor
contract administrator	architect	Superintendent
contract	contract	Contract
contract sum	contract price	contract sum
appendix	Schedule 1	Annexure
works	works	Works

Note that some generic, MW-1 and AS4000 terms for the same thing are all different; others are the same apart from capitalisation.

ACKNOWLEDGMENTS

Writing a text such as this is, in many ways, a very solitary enterprise. However, unsurprisingly, it also involves a multitude of other people with whom I interacted to get information, interpretation, opinions, support and, in the most positive sense of the word, criticism.

I gratefully acknowledge the assistance of all those who have helped during the various stages of the development of this book, but in particular the following people.

Paul Northcott, then instructional designer and editor of Deakin Australia, as distance education advisor, and Jim Smith, then senior lecturer and colleague at Deakin University, as unit advisor, provided patient guidance and mentoring during the seminal process of creating the original study guide.

Ken Macphee, then manager legal and contracts of The Master Builders Association of Victoria, also gave invaluable advice on the legal implications of building and construction contracts during the final stages of preparing the study guide and later during its conversion to the first edition of this book.

Ross Clarke, national manager practice services of the Royal Australian Institute of Architects, John McMullan of McMullan Solicitors, and John Pilley, solicitor, all gave prompt, willing and helpful advice on the legal and contractual implications of more recent building and construction contracts during the preparation of this second edition.

Finally, and most importantly, I wish to acknowledge the encouragement I received from my wife Marika and the infinite patience and forbearance with which she put up with the serial, long-term, disruption of our life, and particularly the evenings together we didn't have.

Greg Goldfayl

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